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CALENDAR FOR JULY.

July, the month of Summer's prime,
Again resumes his busy time;
Scythes tinkle in each grassy dell,
Where solitude was wont to dwell:

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The very insects on the ground,
So nimbly bustle all around,
Among the grass or dusty soil,
They seem partakers in the toil. John Clare.

JULY is an exceedingly important month to the farmer in several respects. It calls again for all his force and skill to secure his hay crop, the great New England harvest, perhaps not second in importance to any other. It is the month, too, upon which another valuable crop in good measure depends,—the golden maize, or Indian corn. This plant requires the frequent hoe, and the fervid suns of July. Indeed, all the crops which the farmer has committed to the earth with so much pains, and which have sprung into healthy and promising plants, now require his constant care to protect them from insects and weeds, and keep the soil in a favorable condition to receive the rains and dews and atmospheric influences.

Summer has now fully come, and her "whole world of wealth" is spread out before us in prodigal array. The woods and groves have darkened and thickened into one impervious mass of sober uniform green, and having ceased to exercise the more active functions of the Spring, are resting from their labors, which *we* know so little how to enjoy. In Winter, the Trees may be supposed to sleep in a state of insensible inactivity, and in Spring to be laboring with the flood of new life that is pressing through their veins, and forcing them to perform the offices attached to their existence. But in Summer, having reached the middle term of their life, they pause in their appointed course, and then, if ever, *taste* the nourishment they take in, and "enjoy the air they breathe."

Like the Woods and Groves, "the Hills and Plains have now put off the bright green livery of Spring; but, unlike them, they have changed it for one dyed in almost as many colors as a harlequin's coat. The Rye is becoming yellow and ripe for the sickle. The Wheat and Barley are of a dull green, from their swelling ears being alone visible, as they bow before every breeze that blows over them." The stiff and stately herds-grass, or as it is called in Europe, the meadow cat's-tail, sways awkwardly to and fro, while the graceful and silk-like red-top yields pliantly to every breeze, and the American cock's-foot, or orchard-grass, with the sweet-scented vernal, meadow foxtail, rye, and other grasses, all mingling their varied colors, and presenting them as they sway in the breeze, afford a most lively and beautiful scene. The late Buttercup, Ox-Eye, Daisy and Red Clover blossoms are still in their prime, and give a charming appearance to the whole. But nothing can be more rich and beautiful at this season than a great patch of purple Clover, lying apparently motionless on a sunny upland, encompassed by a whole sea of other grasses, waving and shifting about it at every breath that blows.

Now a great many things are intensely July-like. Cattle chew their cuds and lash their punctured sides, standing knee-deep in water; fishes fry in shallow ponds; pedestrians along dusty roads quarrel with their coats, and cut sticks to carry them across their shoulders, while every-

thing seen beyond a piece of parched soil quivers through the heated air.

The Garden still has its beauties—as it ever has where it has received a considerate care,—but we cannot stop to particularize them now. The solemn woods are now inviting, where the Whetsaw, the Brown Thrasher and Cherry-wink, make them vocal with their peculiar notes. Boys read Izaak Walton with a new relish, and explore the brooks that take their courses through the meadows or dim woods, and throw the careful bait to the speechless trout in the dark water by the bank, or under some ancient and massive root. Silently as the panther approaches his prey, they move along—now stepping upon a bunch of moss, or a tuft of grass, for the trout's ear is as quick to note a footfall on the walls of his castle as an Indian's, put to the ground.

The *Haying*, the *Harvesting*, the *Weeding*, the care of *Stock*, and the thousand nameless things that press upon the farmer in July, leave him but little time for visiting or study; but there *are* hours for good-nature and pleasant social intercourse with one's own family and the neighbors, and, if rightly improved, will produce a crop as valuable as the crops of the fields.

The Hoeing.—This important operation must not be neglected. The lodging grass, early in July, is a strong temptation to take the scythe in hand instead of the hoe—and it may be well to do so for short periods; but no man of ordinary means can afford to neglect his hoeing; it has cost him too much labor of himself and team, and too much for seed, to omit the cultivation of a crop that needs it. If he allows weeds to crowd and rot his plants, or a hard and repulsive surface to return to the skies unappropriated, the fructifying dews which Heaven has in kindness sent, he will not reap abundantly where he has sown. It is among the first errors of the farmer, not to tend thoroughly the crops he has put in.

Haying.—Grass cut in the morning, spread immediately, turned at noon, and cocked before the dew falls, will rarely need, in good weather, more than a mere opening of the cocks the second day. A load of fence rails would be about as acceptable to a well-fed cow, as much of the herdsgrass that is carried to the barn. It is spread in the intense sun, and exposed to the wind till it is brittle, juiceless and harsh as wire. In our opinion, twice as much hay is spoiled by over-drying as there is by not being dried enough.

Clover hay should be cut in the morning, lay in swath until four o'clock, then turned upside down. The next afternoon gather it with a three-tined fork into cocks, and let it remain two nights more, when it will be sweet, the leaves all remaining on the stems, and the whole will be eaten by the cattle and prove highly nutritious.

Turnips.—In the course of the month, whenever the surface is sufficiently moist to start the seed, sow turnips. The old adage runs—

"The 25th of July, sow turnips,
Wet or dry"

But we have found that a moist condition of the surface had more effect in inducing germination of the seed than the day of the month. After considerable experience and a pretty extended observation, we are still of the opinion that the root crops may be cultivated by most farmers with a decided profit. The great cost has been in keeping down the weeds—otherwise they are not difficult crops to manage. They are easily got in, and may be cultivated with a horse or the wheel-hoe, without any difficulty. Would it not be a good plan to use the same piece of land for a succession of years for these crops, never allowing a weed of any kind to go to seed upon it, and enriching it with manure as free from seeds as it is possible to get it? If such manure is *plentifully applied in the fall*, and plowed under 10 or 12 inches, there will be no complaint that the root will not flourish on the same soil. Where the weeds do not come, carrots, beets, parsnips or turnips may be profitably cultivated.

For the New England Farmer.

DOUBLE PLOW.

Dear Brown:—I have to-day tried the sod-and-subsoil or double plow on the old homestead at Chester, and as this is the first experiment I have witnessed with this implement, in that good old town, I hasten "to make a note of it."

The land was sward, full of witchgrass, and stony underneath, as all the land here is, although it has been plowed a hundred years or so, and the boys have "picked rocks" on it annually. The plowman doubted whether his three yoke of small cattle could "put through" so large a plow, in such land, but he succeeded in finishing his stint of above an acre before night.

Several judicious neighbors looked on, and our unanimous conclusion was that no other plow could run with the same team to that depth—ten inches full,—and that no other plow with any team could do the work so well. The plow is Ruggles, Nourse, Mason & Co.'s largest size, No. 35½.

The double plow is the thing for the hard and stony land of Rockingham County, not in new land, but in the common old fields. We believe that no more team is required to draw it than the single plow, and nothing can put the witchgrass out of sight, like it.

Yours, H. F. French.

Chester, N. H., May 19, 1855.

Coal Ashes for Peach Trees.—Will those who have not otherwise disposed of their coal ashes, place a half bushel around each of their peach trees, in the form of a little mound, and let it remain through the summer, as the best manure for the trees, and as a remedy for the borers. In the fall dig it into the ground.

For the New England Farmer.

HIGH PRICES, &c.

MR. BROWN :—A leading article in your paper of April 14, on high prices, &c., has caused some reflections as to the cause of such prices as we now have and live under. That the prices are high, I admit—in most cases, higher than they should be. But I have seen and lived through high prices before; in 1836 and 7, grain, flour, pork, &c., were as high as they are now; though, taking the round of agricultural produce as a whole, it did not range as high then as now. But then it is, or may be asked, what is the cause of such prices? And, of course, the war in Europe will be named as one thing, emigration for another, speculation for another, and so on. Now, for one, I do not put so much stress on the "war question" to make high prices as many will, though it may affect us some, indirectly, on grain and flour. During our late war with Mexico, which was in operation from 1846 to 1848, I think it did not affect our prices of agricultural produce materially any way, though we were a party and directly interested in that war as a nation; and yet it had the effect to draw away a large number of our population from farming and the productive arts.

But what I consider to be one of the great causes of the present prices is, the constant drain of productive labor from all parts of the country, during the last six years, or since California opened in search of gold. Of course we have had less producers and more consumers in shape of emigration, which emigrants do not produce much in the first six months, but after that they can make producers as well as consumers. Well, the consequence of California may be said that we have had less produce and productions and more gold, which is true to a certain extent, though I am not aware that many are overburdened with that "article" at present. But I am not one of those who believe that a large influx of gold and silver into a country will, as a consequence, make high prices directly. Yet it might have the effect to stimulate all kinds of business, and so produce may rise in consequence. But you say, in substance, "that an influx of gold, like an inflation of the paper currency, adds nothing to the real value of property.* Its effect is merely to make money less valuable, so that none of it is given for articles of real value, as the products of the earth and of the arts." Now I do not see it just in that light. It may be true that a large amount of gold laid down on a worn-out soil, will not improve that soil directly; neither can it produce improved scientific labor, if that labor is not to be found. Still, it can be made to produce the best labor at hand, and in that way the soil can be renovated, and soon the productions on the soil will be worth as much, and more, than the original gold laid out. For instance: thirty years ago (or in 1825 say,) corn could be bought for fifty cents a bushel, and now it is worth a dollar a bushel, (in 1855.) Now, suppose that all agricultural productions could be had at the same ratio at that time, then, of course, so far as a man's living was concerned, fifty cents then was worth as much as a dollar is now. But was fifty cents in silver then worth as much as a dollar in silver is now? Of course not, and why? Because money, that is, "gold and silver," must always hold its relative value when measured by itself. In fact, it is the focus or standard where all real property terminates, and, of course, its value is fixed. So, in reality, I claim that you cannot make money any the less valuable at one time than another, though you may have to give more gold for productions at one time than another. But, then, "Wall Street and State Street" talk about money as being cheap and dear—that is, now they have to pay two per cent. a month, where they used to get it for one per cent., &c. Of course, this means that their business compels them to pay two per cent.; but, in reality, the money is worth no more than when they pay only half per cent.

Another and great reason of the present high prices, I consider, is in the constant drain of gold and silver (since California has opened) to Europe, to pay for imported goods, manufactures, arts, &c., which, in the main, we could just as well make at home. Now, suppose a railroad is to be built through your town, and five thousand dollars worth of railroad iron is wanted to carry the road through your place. Which is the better policy, to raise five thousand dollars and send to England and buy the iron, or have the rails at your own price, and made by your own workmen at home? In the latter case, the five thousand (in California gold) is paid out to workmen in your own town. A gets a part, C a part, and B a part. It is all there among you; what one has not got, another has. But in the former case, it goes out of the country, and it is a matter of chance whether any part ever gets back again. But the policy of the government appears to be to have the balance of trade against us all the while, so that the United States appears to be the "half-way house," where the California gold stops over night; next day it takes the steamer, goes to Europe, and that is the last seen of it. Now, as it appears that we have got to have a large share of European emigration now and for all time to come, would it not be a good plan to save all the productive labor we can, and so keep the gold here in the country to produce and reproduce and pay its own way.

But then, again, as to high prices of produce now and in former years. During the hard winter of 1835 and 6, in the spring of that year, hay was worth twenty-five dollars a ton in all this section, and hard to be got at that. Since that time, it has several times been up to twenty dollars the ton; at this season of the year and now it is worth from sixteen to seventeen dollars the ton. But to show that they had high prices formerly as well as now, I will copy a list of producer's prices from your paper, taken from the *Portsmouth Journal*. This was the price current for February, 1817, or thirty-eight years ago, and these are wholesale prices; of course the retail were higher. "Bacon 15 cents per pound; barley, $1,25 to $1,50 per bushel; beans, $4 to $4,50 per bushel; butter, shipping No. 1, 24, No. 2, 22 cents per pound; corn, $1,90 to $2,10

* An inflation of the paper currency means, of course, an amassing of paper money, say four or five dollars of paper to one of gold and silver. But, then, as the paper currency is only the representative of money, the true standard of property comes down to the actual amount of coin in existence and circulation. If this be so, then gold and silver, or coin, cannot "inflate" the currency, be there ever so much of it, because it is the real standard of property itself. So we understand it.

cents per bushel; coffee, 14 to 21 cents per pound; Virginia coal from $9 to $15 per ton; flour, $14 to $15 per barrel; hay, $21 to $24 per ton; molasses, 48 to 54 cents per gallon; peas, $2,50 to $3 per bushel; rice, 7 cents per pound; rye, $1,75 to $3 per bushel; sugar, loaf 23 to 25 cents per pound, brown 11 to 15 per pound; teas, hyson $1,70, hyson-skin $1, souchong 68 to 75 cents per pound."

In this list of prices, I do not see any thing that comes near it now except butter, which is probably about the same now as then, at retail—28 to 30 cents a pound. I have heard tell that during the war of 1812, for two years molasses was two dollars a gallon, and most other groceries in proportion. This was owing more to the fact that all our seaports at that time were blockaded, and, as these articles were mostly of foreign production, they could not be obtained scarcely at any price. But this list of prices named above, was some three years after peace was declared, so the country had got pretty much over the war question by that time. But then, with these high prices thirty-eight years ago and the present high prices, are the laboring people better off now than then? Of course they are, and why? Because they can earn three dollars as easy now as they could two then. Probably there is two dollars in circulation now, throughout the country, where there was one then, or in that ratio. But then, again, we have three times the population to support now that we had then, taking emigration and all. Most of this, however, is productive labor in good times; but in hard times, like the present, much of it lies idle for want of employment. But, then, what is the remedy? For hard times and high prices, like the present, it will probably be a difficult matter to answer. One thing is certain; more agricultural productions must be raised, and, of course, more men must turn their attention to cultivating the soil. But will they do it?

And another thing is, farmers must lay out more capital on their lands; they must both learn to farm more and farm better; the present prices of farm produce will justify a liberal outlay in manures, in labor, skill, &c. Still, my experience has led me to see that, with the body of farmers generally, they were no more ready to lay out capital in farming when corn was a dollar and a quarter a bushel, than when it only brings but fifty or seventy-five cents. What appears to be wanting most among farmers, is a generel appreciation of the business as an employment; and when this can be fairly understood, no lack of enterprise will be wanting on the part of farmers to make farm improvements, and raise all the produce they can.

A grumbling writer in the *New York Tribune*, a few days ago, on the high prices of grain, says, in substance, that the lowest prices of corn that he can find in the corn districts or the "prairies," is forty-five cents, and from that up to seventy-five cents a bushel, while flour is from ten to twelve and thirteen dollars and a half a barrel for the best in New York. Very well. A letter in your last paper, from Mr. Daniel Fay, dated Oskalooza, Iowa, March 20, says, "corn here is worth twenty-five cents a bushel, wheat from sixty to seventy-five cents a bushel, and pork from two to three cents a pound." He further says, that when "they get a railroad from Mississippi river, after the 'hard times' are over, (very well put in,) their produce will be worth more." Also, "the city of Oskalooza is only twelve years old, and yet they have 2500 inhabitants, with merchants, stores, &c., furnishing every thing for comfort that is wanted." This writer in the *Tribune* further says, that "there is not one old dingy field in Connecticut but that can be made to produce wheat with more profit than at the west. The ground is here to hold the seed, and that is all that is wanted, for 'science' points out the proper ingredients to apply to make the grain, and any dollar so expended will pay back fifty per cent. a year," &c. Now this is all fine talk for outsiders, but, in plain English, there is no truth, in reality, in one-half of the ideas, but a mere ranting exaggeration of the subject. But we recognize in this grumbling writer in the *Tribune* one who, a few years ago, was on a prairie farm at the west. But why did he not stay on the farm and raise grain, and help make "cheap bread," instead of leaving and coming to the city, to live in some six by eight "dog hole," and join in the general hue and cry about starvation of the poor, high prices, nothing to eat, &c. Consistency has, in former times, been called a "jewel," and I think there is something in it; but it is a principle which we generally adopt last.

L. DURAND.

Derby, Conn.

THE EARTH THAT WE WALK ON.

It may surprise some readers to learn that all the earths—clay, flint, chalk, &c., are nothing more than the rust of metals; that at one time, during the age of this world, they were all shining, brilliant metals. Geologists speak of the earth as being hundreds of thousands of years old. All their philosophy is based upon mechanical science: the formation of strata, the upheaving of mountains, the burying of forests, has been attributed to some "great convulsion"—that is, to some shaking together of the earth's crust. Whether this great age of the world be true or not, it is very certain that before any of these events could have taken place, the formation of each of the earths must have been the work of ages; otherwise the metals, of which their base consists, could not have been so completely rusted as to assume an earthy texture. To understand this, we must leave the mechanical, that is, the geological theory, and enter upon the primary or chemical theory. It cannot be disputed that the first changes of the earth's surface were of purely a chemical nature. Combinations took place then as now; the metallic bases, by mere contact with the atmosphere or water, passed into oxyds, as the chemist calls them, or earths, as expressed in daily conversation. Chemists thus recognize something like forty different kinds of these oxyds or earthy bodies, some being very scarce, and others as plentiful. By the merest touch of air, some of the metallic bases of these earths instantly pass into the rusty or earthy state; some, by contact with water, are so energetic that they burst into flame.

By this process of reasoning, we come to the conclusion that the world is one mass or globe of mixed metals, of which the mere crust has be-

come rusted, or of earthy form; the outer rind, as it were, preventing any rapid combination taking place with the metallic surface, five or six miles below the face of the dry land. Eruptions from volcanoes are probably produced by the sea getting down to the metallic surface, through some some fissure in the earth's crust; decomposition of the water then takes place—fire, flame and steam causing an eruption. It would be an instructive lesson to man to quarry into the earth's crust to the depth of ten or twelve miles.—*Scientific American.*

For the New England Farmer.

SHAPE AND CONSTRUCTION OF CHURNS.

If I am correct in what I here say, this is a subject of vast importance. I am a plain farmer, and keep a few good cows, and have the vanity to believe my wife makes as good butter as any woman; I have my house (which is small) well filled with patent churns and patent humbugs, some of one shape, and some another. Some years ago, I became satisfied the cylinder was the only proper shape for a churn. In all square and oblong box churns, a large amount of cream must stick, and can only be churned by scraping it down. Now, does this cream put down at different times, all come to butter? If not, there is a loss; but this is not the worst of all; it leaves a portion of half-churned cream, which is mixed with the butter in small particles, from which the buttermilk cannot be extracted, hence the butter soon spoils. I am satisfied more butter is spoiled by uneven churning than by all other causes.

I am aware when I speak of box or square churns, as losing five or ten per cent. of butter, some will disbelieve me. But an honest trial will convince unprejudiced dairy-men of the fact. I saw something like this in a handbill put out by Hall & Holmes, the proprietors of Fyler's Butter Working Churn, I was disposed to disbelieve. But about one year ago I was induced to purchase one of the above churns, and I find it proves all it was recommended, and will make full ten per cent. more butter than the square-shaped churns in use; and the reason is, it stirs all the cream alike, there is no putting down of the cream. As the dasher fills the cylinder, and plays astride of breakers, so there is a constant reaction; and what is more, this churn will work butter and mix the salt better than anything I ever saw. I feel bound to say this, because it is no humbug, but will perform all the proprietors claim for it. And I feel the more willing to speak out, as it is almost time to make butter, and I can recommend this churn above all others.

For Pickling Walnuts.—The walnuts should be gathered between the first and the middle of June. Put them into a strong brine and let them stand ten or twelve days. Then soak them for two or three days in weak vinegar. Then scrape them well, and to every peck of walnuts add an ounce of cloves, and half an ounce of whole black pepper. Put them into a small-mouthed jar and cover with strong vinegar. They will be fit for use in about four weeks. They are a very nice pickle, and will repay the labor of making.

HIDDEN LIGHT.

I much mistrust the voice
That says all hearts are cold,
That mere self-interest reigns,
And all is bought and sold.

I much mistrust the man
Who will not strive to find
Some latent virtue in
The soul of all mankind.

Yes! if you say the fount
Is sealed and dry, I know
It needs a wiser hand
To make the waters flow.

If you would still appeal
To evil life in all,
I know a demon band
Will answer to your call.

But when the Lord was gone,
The Lord who came to save,
Two angels, fair and bright,
Sat watching by the grave.

And from that blessed hour,
With an immortal mein,
In every tomb of Good
Some angel sits unseen.

The spell to bring it forth?
With lowly, gentle mind,
With patient love and trust,
Go seek—and ye shall find.

Household Words.

For the New England Farmer.

TURNIPS FOR PIGS.

Mr. Editor:—In your paper of the 20th January, I find an article with the above heading. Our friend from "Down East," Bethel, Me., makes the interesting inquiry, whether any of your correspondents have had any experience in feeding swine on turnips?

I have, for several years past, kept several swine, though not to such an extent as some of your Middlesex breeders. Mr. Haven, of South Framingham, of whom I purchased a Suffolk pig last winter, had about 120, of all sizes, sexes and ages; and his feed at that season was principally beef scraps, boiled in water, with some rice or corn meal, which I thought more economical than any feed we had ever found in our vicinity.

I have produced, for several years past, some two or three hundred bushels annually of the Swedish, or, as we call them here, the sweet turnip, which I think the best root I can grow (compared with the expense of raising,) for any stock, including swine.

I usually keep two or three breeding sows, that produce a litter each in a season; and I commence feeding them in November or December on raw turnips, chopped, night and morning, till they litter, which is usually from the first of March to the first of April; they will eat them as readily as corn, while if, by chance, a ruta-baga should be among them, it would be rejected. I think the flat turnip of little value for swine; the ruta-baga, though similar to the Swedish, is far superior for the table; and, as I have never had a hog that refused the Swedish after two or three feedings, I think they are *the* turnips, and much cheaper than any other feed for winter and spring. No meal is needed until the sows litter and nurse. The expense of cooking is saved, for

they prefer them raw, unless meal is added. For fattening pork, for rearing young shoats and for nursing sows, where meal is required, they are, I think, fifty per cent. cheaper than any root we can raise at this time, to cook, with which to feed meal. JOSEPH RAYMOND.

Hubbardston, Jan. 22, 1855.

For the New England Farmer.

GROUND NUTS---SOFT SOAP.

MR. BROWN :—Your correspondent, "G. F. N." asks, if the "Ground Nut, or Indian Potato," cannot be cultivated to "make it a valuable root." I answer yes, presuming it to be the artichoke—known in boyhood's days as the "ground nut." No vegetable is more valuable for pickles, whether a "child of nature" or one of highly-cultivated taste. Cucumbers, peppers, tomatoes, melons, onions, &c. fall into insignificance compared with the artichoke as a delicious, crumpy pickle. It never grows soft; a lady at my side says, "I wish I had a bushel of them this minute."

Dig them, wash them clean and put them into vinegar (and spices if you want good pickles of any kind;) no salt pickle or scalding is required as with the usual vegetable pickles.

To make Soft Soap.—18 pounds of potash to 18 pounds of clarified grease makes a barrel of soap; pour in cold water and stir. Potash is cheap. There was a tradition among our ancient matrons, that May was the lucky month for "soap to come." This new practice, without regard to time, dispenses with the ley-leach, hot fires and various vexatious troubles, and every family can make soap that makes *grease*. H. P.

THE USE OF LEAVES.

The office and utility of leaves are becoming better understood by cultivators than formerly; yet we find a good many still adhering to the old belief that the sun's rays, directly shining on forming fruit, are what perfect it independently of other influences.

On this subject, theory and practice have been invariably found in perfect accordance with each other. The principles of physiology teach us that the sap of a tree, when it passes in at the roots, remains nearly unchanged in its upward progress through stem and branches, until it reaches the leaves, where, being spread out in those thin organs, to light and air, it undergoes a complete change, and thus becomes suited to the formation of new wood and new fruit. Strip a rapidly growing tree of its leaves at midsummer, and from that moment the supply of new wood ceases, and it will grow no more till new leaves are formed; and if it have young fruit, the growth and maturity of the latter will cease in the same way. A few years since, a Yellow Gage plum tree lost all its foliage from leaf-blight, when the plums were not fully grown, and while yet destitute of flavor. The fruit remained stationary and unaltered, until, in a few weeks, a second crop of leaves came out. They then swelled to full size, received their crimson dots, and assumed their honied sweetness flavor.

The object of pruning should be, therefore, to allow the leaves to grow to full size without being injured from crowding.—*Anon.*

AFRICANS NO ARITHMETICIANS.

Mr. Gavett, a traveller in South Africa, says: "We had to trust to the Damara guides, whose ideas of time and distance were most provokingly indistinct; besides this, they have no comparison in their language, so that you cannot say to them 'Which is the longer of the two, the next stage or the last one?' but you must say, 'The last stage is little; the next, is it great?' The reply is not, it is a 'little longer,' 'much longer,' or 'very much longer;' but simply, 'It is so,' or 'it is not so.' They have a very poor notion of time. If you say, 'Suppose we start at sunrise, where will the sun be when we arrive?' they make the wildest points in the sky, though they are something of astronomers, and give names to several stars. They have no way of distinguishing days, but reckon by the rainy season, the dry season, or the pig-nut season. When inquiries are made about how many days' journey off a place may be, their ignorance of all numerical ideas is very annoying. In practice, whatever they may possess in their language, they certainly use no numeral greater than three. When they wish to express four, they take to their fingers, which are to them as formidable instruments of calculation as a sliding rule is to an English school-boy. They puzzle very much after five, because no spare hand remains to grasp and secure the fingers that are required for 'units.' Yet they seldom lose oxen; the way in which they discover the loss of one, is not by the number of the herd being diminished, but by the absence of a face they know.

When bartering is going on, each sheep must be paid for separately. Thus, suppose two sticks of tobacco (a stick is about an ounce) to be the rate of exchange for one sheep, it would sorely puzzle a Damara to take two sheep and give him four sticks. I have done so, and seen a man first put two of the sticks apart and take a sight over them at one of the sheep he was about to sell. Having satisfied himself that that one was honestly paid for, and finding, to his surprise, that exactly two sticks remained in hand to settle the account for the other sheep, he would be afflicted with doubts; the transaction seemed to come out too 'pat' to be correct; and he would refer back to the first couple of sticks, and then his mind got hazy and confused, and wandered from one sheep to the other, and he broke off the transaction until two sticks were put into his hand and one sheep driven away, and then the other two sticks given him and the second sheep driven away. When a Damara's mind is bent upon number, it is too much occupied to dwell upon quantity: thus, a heifer is bought from a man for ten sticks of tobacco; his large hands being both spread out upon the ground, and a stick placed on each finger, he gathers up the tobacco; the size of the mass pleases him, and the bargain is struck.

You then want to buy a second heifer; the same process is gone through, but half sticks instead of whole ones are put upon his fingers; the man is equally satisfied at the time, but occasionally finds it out and complains the next day. Once, while I watched a Damara floundering hopelessly in a calculation on one side of me, I observed Dinah, my spaniel, equally embarrassed on the other. She was overlooking half a dozen

of her new-born puppies, which had been removed two or three times from her; and her anxiety was excessive, as she tried to find out if they were all present, or if any were still missing. She kept puzzling and running her eyes over them backwards and forwards, but could not satisfy herself. She evidently had a vague notion of counting, but the figure was too large for her brain. Taking the two as they stood, dog and Damara, the comparison reflected no great honor on the man."

For the New England Farmer.

TIME FOR THOUGHT IN THE FIELDS.

Friend Brown:—"A Reader," who criticises the articles in the *Monthly Farmer*, makes some remarks on the following sentence in Mr. Fay's Essex County address: "He who delves and digs the earth from morning until night, has little time and less inclination for thought." I have been happy to agree with him in most of his remarks, but do not in this. Cannot a man think while planting, hoeing, and harvesting his crops? Think ye the only place for deep thought is in the office of the lawyer, doctor, or office of the priest? Who that has one spark of animation left when he goes into his fields, with the free breath of heaven upon his cheeks, and standing upon soil which he calls his own, cannot think, and think deeply, too! I assure you it is not I.

"A Reader" says, "the advantages which the farmer enjoys for study and reflection, and his opportunities for profiting by the changes of seasons and the successive beauties which the rolling year presents for his admiration and improvement, are generally dwelt upon by agricultural orators in poetic ecstacies, (where is a better place to make poetry than in the field, on a pleasant summer morning?) that are but poorly realized by him who sits down in a warm room to study, after a day spent in the woods, with the thermometer pointing at zero; or by him who attempts to admire the glories of sunrise, after mowing long enough to be thinking of breakfast, or of his feet and legs, that are sopping wet with the chill dews of a summer morning." Now I have some experience in this matter, for I carry on my farm of about ninety acres, without the help of one hand, so much as three months in a year, and have been out teaming this winter with the thermometer pointing thirty degrees below zero, and had ample time for thought and consideration, and a grand time for study by a good fire when I got home. As to the glories of sunrise, no one can beat me in the admiration of that; and as to thinking of breakfast up here in Vermont, (except some of the very slack ones,) we are enjoying the glories of sunrise so much, even while mowing, that we are hardly ready to go when the summons comes; we have a way, also, to fix our feet and legs, so that we suffer no more from the chill dews (if I may call them so,) than if we remained in the house. We do not have to delve so but that we can look around upon nature and up to nature's God. If our friend "Reader" had said the farmer has less inclination to communicate his thoughts, I should probably agree with him.

Now, friend Brown, will you permit me to quote from an Essex address, by Hon. E. Everett, as in more accordance with my views. "The reflecting mind, it is true, beholds traces of a higher wisdom and goodness in every step of every walk of life; but the husbandman, who drops a seemingly lifeless seed into the cold, damp earth, there in a great part to decay—who sees the vital germ in a few days pierce the clod, rise into the air, drink the sun's rays and the dews of heaven, shoot upwards and expand, array itself in glories beyond the royal vesture of Solomon, extract from the same common earth and a thousand varieties of the green of the leaf—the rainbow hues of the petals—the juicy or the solid substance of the fruit, which is to form the food for man and his dependent animals,—I say the intelligent husbandman who beholds this, seems to step behind the veil which conceals the mysteries of creative power, and sit down (if I may so speak,) in the laboratory of Omnipotence."

Now, Mr. Editor, I have endeavored to make this as short as possible, and yet I have but just began; but I will ask one or two questions, and then stop. Cannot a farmer exercise his thoughts on various subjects, even when at work? And if he reads, will he not have inclination to criticise, compare, and come to conclusions? I think he will, and in this find rational and rapid improvement. W. S.

South Woodstock, Vt., Feb., 1855.

AMERICAN PLATE GLASS.

On Thursday, last week, we experienced the pleasure of seeing the first plate glass manufactory, established in our country, in successful operation, at the foot of North-sixth Street, Brooklyn, (formerly Williamsburg.) In the month of January last, not a brick of it was laid; and on the day mentioned, we saw six huge plates of glass, nine feet by four, cast with great expedition, and with as complete success as if it were in an old establishment. Some speeches were made, after witnessing the operations, by some of the select party invited; of these, some were very appropriate and pointed, others were not. Judge Beebee, who was present, paid Mr. Dickson, the manager, a very high compliment; he said he came here from England, with all the plans in his brain, and had ordered every thing from beginning to end; and so well had every thing been planned and executed, that not a single brick had to be relaid, and nothing has been wrong done.

The process of making plate glass consists in melting the silex and flux in large crucibles, then emptying the molten mass upon a smooth iron bed, with guide ways or strips of metal at the sides, on which rolls a huge iron roller, which smooths down the molten mass on its bed like a baker rolling out a cake. When it congeals, which it does rapidly, it is shoved on a rolling table into the annealing oven. American white sand, for making glass, took the prize in the London Exhibition, in 1851, and we see no reason why we should not manufacture as good, if not better plate glass than any other nation. The six large plates were made in about an hour; every thing was conducted skilfully, and no mistakes were made; the utmost satisfaction was given. The best wishes were expressed for the success of the enterprising American Plate Glass Company.—*Scientific American.*

FROM A DAGUERREOTYPE OF THE SHERMAN MORGAN.

Sire,
Old Sherman,

—

Gr. Sire,
Justin Morgan.

Color,
Chestnut.

—

Weight,
1050.

KEPT BY A. J. CONGDEN, AT LANCASTER, N. H.

This horse, of *known* pedigree, as above, was 19 years old in August last. He was raised in Campton, N. H., and has been kept in New Hampshire, Vermont and New York. He now stands at the stable where the celebrated "Old Sherman" died, in 1835. Of *him* he is almost an exact pattern, on an enlarged scale. He is considered, by judges who have known both; a worthy successor to so distinguished a sire.

Of great docility, spirit, energy, speed and endurance; of beautiful color; of elegant form and action, he possesses an unusual combination of desirable qualities, and his well known stock is fully *proved* to be of the highest excellence.

Very few studs sired by the "Old Sherman," the most famous of the Morgans, still live—the "original Vermont Black Hawk" being one. The SHERMAN, some years younger than any other, is believed to be the *only* one east of the Connecticut.

At the same place stands also the "KENT MORGAN, 11 years old, bay, very elegant, a grandson of Old Sherman and of old Woodbury. Pedigree correct. He possesses a remarkable combination of the peculiar excellences of *both* these best original branches of the Morgan race. Colts of this horse command good prices—from $200 to $600.

BEEF AT ONE YEAR OLD.—We copied in an early number, an account of the success of Mr. Crowell, in rearing calves so as to fit them for the butcher at one year old. When a few days old he commenced feeding them on sour milk, keeping them on the same kind of food during the summer, taking good care to feed them uniformly, but not very abundantly, so as to keep them growing thriftily without forcing them too rapidly. In the fall they were put in the stables, and fed on hay, and a little meal, increasing the quantity of the latter gradually, with a view of fitting them for "beef" in the spring at one year old or a little under. These calves at eleven months old, look like young oxen, and are estimated to weigh about 600 pounds each alive. A correspondent at Cazenovia writes us that he has tried the same plan with equal success.—*Rural New-Yorker.*

For the New England Farmer.

CHEMISTRY.—No. 1.

WHAT MAY WE LEARN FROM IT?

MR. EDITOR:—With your permission, I propose to give your readers some facts in relation to this much-neglected branch of natural science; not, however, because I feel myself competent to the task, for I am a mere tyro in this important subject, and it is only to awaken an interest in it, and to call forth light from abler pens, that I attempt to say anything about it.

It is the province of chemistry to teach us of what all substances are made, the kind and proportion of matter in each, their relation to each other, and the changes that take place, and what it is that produces these changes. Everything of which we have any knowledge, from our own bodies down to the most insignificant plant that ever attracted the attention of man, is made up of proper substances in due proportions, and with the same species under the same circumstances, they are always alike.

Does the cultivator of the soil wish to aid nature in producing any vegetable? Chemistry tells him of what that vegetable is composed, thus telling him what to use as a stimulus to his growing crops.

Certain substances or chemical elements when brought together destroy (disorganize) each oth-

er. Here, too, she is ready to speak. The farmer who composts a cord of manure, does it at a loss, unless he acts in accordance with chemical principles. Nothing has been added and nothing lost since the creation, and all the varied forms of vegetation are only a change of matter, in form and location, and as these changes are constantly going on, not only around us but in our very systems, it must be of vital interest to us to know something of them as they daily occur. I am happy to be able to say that this branch of science, so useful to the farmer, is beginning to receive a share of the attention due it.

S. TENNEY.

West Poland, Me., March, 1855.

For the New England Farmer.

SHAPING CATTLES' HORNS.

MR. EDITOR:—In the *Farmer* of Jan 27, is an inquiry from Mr. S. F. Alger respecting the shaping of young cattles' horns; and as no one has seen fit to impart the information for which he wishes, I thought that I would send you a few lines, stating what little I know of the point in question. I have not had the experience of many others; but I have no hesitation in saying, that the horns of cattle if commenced with in season, may be made to assume any form to suit the taste of the operator, (provided it is reasonable.)

My first attempt to correct the freaks of nature in this matter, was upon the horns of a pair of steers, then owned by my father. Without giving the details, suffice it to say, that I *compelled* the horns of one steer to take a more upright position, and at the same time a broader view, so as to correspond with those of the other. Since that time I have had several cases, and have never failed of success. In my own opinion, the best *time* is to commence in the month of March, and continue the operation until the horns become hardened for the winter. The process is simply this; if you wish the horns to grow more upright, you must take a knife or other instrument, and by shaving or scraping, reduce the shell of the horn to about one-half the original thickness, as a *general* rule, (but this must depend on the amount you wish to alter the horn,) upon the *under* side of the horn. And if at the same time you wish to spread, or contract, always upon the opposite side of the horn from the direction in which you wish it to turn. The horn should always be left *perfectly* smooth, and occasionally oiled over with some penetrating oil. If the horns are to be *corrected* but little, the operation of thinning once may be sufficient, but if they are more imperfect, it may be necessary to follow them up with more thinning until they are *made to yield*. There may be others who will give better light than this, but if no one else shall respond to your request, this *small* light may be better than none at all.

AMPLIFICATOR.

West Brookfield, Feb. 12, 1855.

REMARKS.—Mr. J. FARNUM, of Uxbridge, Mass., confirms the above, and says the reason is this: "The side of the horn thus scraped off, by loosening the hard surface, grows faster than the unscraped side, and causes the horn to turn or curl in an opposite direction."

For the New England Farmer.

CULTURE OF MADDER.

MR. EDITOR:—Will you be so kind as to give your friends in this region some information in relation to the culture of Madder? This subject is exciting considerable interest in our community of late, and any information you may be able to impart through the *Farmer*, or to me, will be a favor to some of the readers of your valuable paper in this county. There is an old man in Hydepark who tells of working at it some time, when it was very profitable. I think information from you would be preferable to his. I wish to know whether a piece of the root is planted for the first crop, or whether I must start from the seed? Also, where shall I get it, what kind of soil, and what would be the probable income per acre?

A LAMOILE FARMER.

REMARKS.—Mr. Russell Bronson, of Birmingham, Huron County, Ohio, a successful cultivator of madder, has published a communication upon this subject, which contains the following information:—

"A location facing the south or south-east, is to be preferred. A sandy loam, not over stiff and heavy or light and sandy, or a good brown, deep, rich upland loam, free from foul grass, weeds, stones, or stumps of trees. Where a crop of potatoes, peas, corn, or wheat has been cultivated the past season, plow deep twice, once in September and once in October, and if rather stiff, let it lie after the plow until spring. When the spring opens, and the ground has become dry and warm—say in Tennessee 1st of April, Ohio 15th, and New York 25th to 1st of May, (I speak of the spring of 1836,)—plow again deep, the deeper the better; then harrow well and strike it it into ridges with a one-horse plow, 3 feet wide and 4 feet vacant, or making a ridge once in 7 feet, raising it, if on rather moist ground, 8 or 10 inches, and dry land 6 or 8 from the natural level; then, with a light harrow, level and shape the ridges like a well-formed bed of beets, &c.

We will suppose you intend to plant one acre of ground, and that you have purchased eight bushels of tap roots in the fall, and buried them like potatoes on your premises; count the ridges on your acre, and take out of the ground one bushel of roots and plant it on one eighth of your ridges; you will then be able to ascertain how to proportion your roots for the remainder.

The following is the *manner of planting, cultivating*, &c., when the quantities of ground do not exceed three or four acres. One person on each side of the ridge to make the holes, (plant four inches below the surface of the bed, or thereabouts, when covered,) one on each side to drop the roots, and one on each side to cover, pressing the hill in the manner of planting corn; or three persons may be placed on one side, as the case may be, whether you have one or more acres to plant. Let the owner be the dropper of roots, and his most thorough assistant behind him. Make the holes from 12 to 18 inches apart, and about six inches from the edge of the ridge. As the plants are supposed to have been purchased in the fall, the roots may have thrown out sprouts, and possibly have leaved. In this case, in drop-

ping and covering, you will leave the most prominent sprouts a little out of the ground, as where a plant has leaved, it ought not to be smothered.

When the plant gets up three or four inches, weed with the hoe, and plow with one horse between the ridges or beds, but not on them; this will take place two or three weeks after planting. When up 12 or 15 inches, many of the tops will fall; assist them with ten feet poles crossing the beds, covering with a shovel or garden-rake, throwing the soil from between the ridges. After loosening with the one-horse plow, you will, with a shovel, scatter the earth between the stalks, rather than throw it into heaps; of course we wish to keep the stalks separate, as they are to form new and important roots in the centre of the beds. About the 20th of June you may plow between the beds, and scatter more earth on the fresh tops, (all but the ends,) and when you get through, you may plant potatoes between the beds, if you please. I do not recommend it if you have plenty of land, although I raised 1070 bushels of pink-eyes on eight acres the first year, and sixty bushels of corn. If your land is perfectly clear of weeds, you are through with your labor on the madder crop for this year, except in latitudes where there is not much snow and considerable frost; in this case, cover in October, two inches or thereabouts. Second year, some operations in weeding, but no crop between; cover once in June. Third year, weed only. Fourth year, weed in the spring, if a weedy piece of ground.

Begin to plow out the roots in Tennessee (3 years old) 1st of September; Ohio (4 years) same time; New York 15th or 20th, after cutting off the tops with a sharp hoe. In plowing out the roots, use a heavy span of horses and a large plow. We ought to choose a soil neither too wet nor too dry, too stiff or light. Shake the dirt from the roots, and rinse or wash, as the soil may be stiff or light; dry in a common hop-kiln; grind them in a mill similar to Wilson's patent coffee-mill; this mill weighs from one to two pounds. The madder mill may be from sixty to 80 pounds weight. Grind coarse, and fan in a fanning mill; then grind again for market. The profit of this crop is immense; the exhaustion of soil trifling, and glutting the market out of the question.

Madder is used in whole, or part, for the following colors on wool, both in England, France and America, viz.: blue, black, red, buff, olive-brown, olive, navy blue, and many others; finally, it produces one of the most beautiful, durable, and healthy colors that is at this time dyed; as for calico printers, it enters greatly into their dyes.—*Am. Farmer's Instructor.*

As the tops of the plants spread very much, some advise placing them in hills, somewhat like Indian corn, four and even six feet apart each way, and two plants in each hill."

DEPTH OF PLANTING SEEDS.—We find the following from a foreign author, among the papers read before the Farmer's Club of the American Institute:

Seed buried ½ inch deep, up in 11 days, 7-8ths of them; 1 inch deep, in 12 days, all; 2 inches deep, in 18 days, 7-8ths; 3 inches deep, in 20 days, ¾th; 4 inches deep, in 21 days, ½; 5 inches deep, in 22 days, 3-8ths; 6 inches deep, 23 days, only one came up.

The rays of the sun furnish light—those nearest the yellow are remarkable for impeding the heat-giving rays are favorable to it, if plenty of water is present; while the blue rays, or those concerned in chemical action or actimism, (from the Greek actim, a ray,) accelerate the process and cause a rapid growth. His experiments were, making the light pass through colored glasses upon the vegetable. He thinks that a blue glass will prevent scorching of leaves, and that red glass will increase the heat. He says that a pale green glass made with oxide of copper, is best fitted for conservatories—green being a compound of the yellow or luminous rays with the blue or chemical rays. A delicate emerald green glass has, at his suggestion, been used in glazing the large Pall House at Kew.

NATIVE.

Some discussion has been had of late, as to the use and meaning of this term—chiefly as it is applied to cattle, or stock upon the farm. In itself, it is as clear and as intelligible, as any other word that is used, being defined by the Latin word from which it is derived, which simply indicates the fact of being born, or the place of birth. If there be any ambiguity or uncertainty about this term, it must be from the words to which it is often attached, rather than from the word itself.

As for instance, speaking of natives, meaning native cattle or native breeds of cattle, one may have ideas relating only to the place in which they came into being, another to those considerations which ensure the ability to reproduce the like. It therefore is of the highest importance, that writers who would instruct others, should accurately explain the meaning of the words they use, in the connection in which they are used.

We find no fault with these discussions—we think their effect is decidedly beneficial; but we are sorry that gentlemen of distinguished ability, should waste their strength on *words only*—remembering, as the great Doctor Johnson long ago said, that

> "Words are the daughters of earth,
> Things the sons of heaven."

TO CURE SHEEP SKIN WITH THE WOOL ON.—Take one table spoonful of alum and two of saltpetre; pulverize and mix well together, then sprinkle the powder on the flesh side of the skin, and lay the two flesh sides together, leaving the wool outside. Then fold up the skins as you can, and hang them in a dry place. In two or three days as soon as they are dry, take them down and scrape them with a blunt knife till clean and supple. This completes the process, and makes a most excellent saddle cover. Other skins which you desire to cure with the fur on, may be treated in the same way.

We can speak in favor of the above recipe. It does all it promises. Such skins make excellent mats for in-doors.—*Farmer's Companion.*

For the New England Farmer.

THE CURCULIO.

Mr. Brown :—As the season is fast approaching in which this insect commences its depredations upon the plum, I wish to call the attention of those who have had more experience in plum-raising than myself, that if possible some remedy may be devised to destroy this noxious insect, or prevent its attacks upon this wholesome fruit. I would like to inquire at what time, and how, they propagate their species? The egg or larvæ that is deposited in the fruit, falls to the ground in the premature decay of the plum ; and the changes which take place from this time until it comes forth a perfect insect, ready again to destroy the choice fruits of our labor, are unknown to me. If it lies during this time in the ground beneath the tree, why can it not be destroyed by placing stone lime under the trees, and slaking it there, or by the application of ashes, salt, or some other substance that is destructive to animal life? I am not satisfied as to the amount of territory which they traverse, whether they roam about like other winged insects from tree to tree which are at a distance from each other, or whether they remain about the tree on which they are first found. I have several trees which have been growing for years, on which I have never found a ripe plum ; they blossom and set well, but not one tree escapes the bite of the deadly enemy, while many of my neighbors, near by, have an abundance of fruit. If all who have trees on which they hope to raise this fruit, will try experiments, and devise some means of preventing its destruction, and those who have tried and been successful, will make their remedies known through your valuable paper, they will confer a favor on many lovers of good fruit. Carlos.

Middlebury, Vt., May 7, 1855.

Remarks.—The plum-weevil, or curculio, as it is often called, is fully described by Dr. Harris, in his excellent work on "Insects Injurious to Vegetation." He says "they begin to sting the plums as soon as the fruit is set, and continue their operations to the middle of July, or as some say, till the first of August. In doing this, the beetle makes a small crescent-shaped incision with its snout, in the skin of the plum, and then, turning round, inserts an egg in the wound. From one plum it goes to another, until its store of eggs is exhausted; so that, where these beetles abound, not a plum will escape being stung. Very rarely is there more than one incision made in the same fruit ; and the weevil lays only a single egg therein. The insect hatched from this egg is a little, whitish grub, destitute of feet, and very much like a maggot in appearance, except that it has a distinct, rounded, light brown head. It immediately burrows obliquely into the fruit, and finally penetrates to the stone. The irritation, arising from the wounds, and from the gnawing of the grubs, causes the young fruit to become gummy, diseased, and finally to drop before it is ripe. Meanwhile, the grub comes to its growth, and immediately after the falling of the fruit, quits the latter and burrows in the ground. This may occur at various times between the middle of June and of August ; and in about three weeks afterwards, the insect completes its transformation and comes out of the ground in the beetle form."

The fruit may be preserved by dusting it with lime, ashes or plaster, twice a week, when the fruit is wet, beginning as soon as it is as large as a pea. We cannot account for the fact that your neighbor's fruit is not attacked.

For the New England Farmer.

MIXING DIFFERENT VARIETIES OF CORN, AND CUTTING THE STALKS.

Observations of an octogenarian on the mixing of different varieties of corn, and on the practice of cutting the stalks of corn.

The fact has never been doubted that the produce of different sorts of corn which are planted side by side, will be mixed. But how this result is caused seems not to be generally understood.

The common opinion has been and still is, that it is caused by the falling of the pollen from the top stalk on to the end of the ear. My observation teaches me otherwise. There is to every kernel a silk which is tuberous, and when fully grown the end of it, beyond the top of the ear, falls down, so that the pollen could have no effect upon it.

If you go into a field of corn, on a calm day, you will see, by means of a good glass, vapors, like the thread of a spider's web, pointing from the top stalk to the end of the ear. I have seen this without a glass when the vapors were so abundant as to effect the light over the field, making it less clear than it is at a distance. It is in this way, I believe, by a law of attraction, that the effect is produced. I have seen one man who had made the same observation, but had not thought of its application.

Now a little, if you please, about cutting the top stalks of corn.

By some this is never practiced, because they believe the corn is benefited by having the stalks remain till it is ripe. Let us see. Every ear of corn comes out of a joint, and for the corn to be benefited by the stalk, the sap in the stalk must descend to the joint and ascend to the ear, which I think no observer of the circulation of sap in vegetables will admit to be the case. After years of careful observation, I am convinced that the stalk does no good to the corn after the top of it is dry. But if the top stalks are then removed, the sun will be let in upon the ears and the corn will ripen much faster. *Book Farmers*, I suppose, think otherwise, and recommend cutting up the corn entirely, or suffering the whole to remain till perfectly ripe.

Westboro', Dec. 11, 1855.

Pickled Peaches.—Take a gallon of good vinegar, add a few pounds of sugar, boil it for a few moments, and remove any scum that may rise;

then take cling stone peaches that are fully ripe, rub them with a flannel cloth, to get off the down upon them, and stick three or four cloves in each; put them into a glass or earthen vessel, and pour the liquor upon them boiling hot; cover them up, and let them stand in a cool place for a week or ten days, then pour off the liquor and boil it as before, after which return it boiling to the peaches, which should be carefully covered up and stored away for future use.

For the New England Farmer.

THE WOOD-THRUSH.

This bird has not, I believe, been mentioned in any of the essays which have occasionally appeared in the *Farmer* upon the "Birds of New England." I have been hoping some one would write upon the merits of this sweet songster of our woods and groves, but, despairing of this, have myself undertaken the pleasing task. The wood-thrush, wood-robin, or ground, as it is differently named, inhabits the whole of North America, from Hudson's Bay to the peninsula of Florida. It arrives in New England towards the last of April, and returns to the south about the beginning of October. Not having its *exact* description, I have quoted the following from WILSON's *American Ornithology:* "It measures eight inches in length, and thirteen from tip to tip of the expanded wings; the upper mandible of a dusky brown, bent at the point and slightly notched; the lower, a flesh color towards the base; the legs are long, and, as well as the claws, of a pale flesh color, or almost transparent. The whole upper parts are of a brown-fulvous color, brightening into redish on the head, and inclining to an olive on the rump and tail; chin white; throat and breast white, tinged with a light buff color, and beautifully marked with pointed spots of black or dusky, running in chains from the sides of the mouth, and intersecting each other all over the breast to the belly, which, with the vent, is of a pure white; a narrow circle of white surrounds the eye, which is large and full, the pupil black, and the iris of a dark chocolate color; the inside of the mouth is yellow. The male and female of this species, as, indeed, of almost the whole genus of thrushes, differ so little as scarcely to be distinguished from each other."

His powers of song are thus described: "But at whatever time the wood-thrush may arrive, he soon announces his presence in the woods. With the dawn of the succeeding morning, mounting to the top of some tall tree that rises from a low, thick-shaded part of the woods, he pipes his few, but clear and musical notes, in a kind of ecstacy, the prelude or symphony to which strongly resembles the double-tonguing of a German flute, and sometimes the tinkling of a small bell; the whole song consists of five or six parts, the last note of each of which is in such a tone as to leave the conclusion evidently suspended; the finale is finely managed, and with such charming effect as to soothe and tranquilize the mind, and to seem sweeter and mellower at each successive repetition.

"The favorite haunts of the wood-thrush are low, thick-shaded hollows, through which a small brook meanders, overhung with alder bushes, that are mantled with wild vines. Near such a scene he generally builds his nest, in a laurel or alder bush. Outwardly it is composed of withered beech leaves of the preceding year, laid at the bottom in considerable quantities, no doubt to prevent damp and moisture from ascending through, being generally built in low, wet situations; above these are layers of knotty stalks of withered grass, mixed with mud and smoothly plastered, above which is laid a slight lining of fine, black, fibrous roots of plants. The eggs are four, sometimes five, of a uniform light blue, without any spots.

"The wood-thrush appears always singly or in pairs, and is of a shy, retired, unobtrusive disposition. With the modesty of true merit, he charms you with his song, but is content and even solicitous to be concealed. They are easily reared from the nest, and sing nearly as well in confinement as when free."

By the above description of the wood-thrush, it will readily be distinguished from the brown thrush, or thrasher, as it is called in New England, which is a larger species of the thrush, and a well known and very distinguished songster, but far inferior to the wood-thrush in richness and melody of voice. From my early youth, the song of the wood-thrush has, for me, had a peculiar charm—a charm which I have never found in the song of any other bird. His usual time of song is in the early morn and between sunset and dark; but sometimes his sweet voice can be heard in some shady retreat, at the still hour of noon. In cloudy or wet weather, his clear, musical notes can be heard from morning till night. There is something in the rich tones of his voice which is indescribably sweet and harmonious, and which, together with the solitude and beauty of the place he usually selects to unburden his full heart of its melody, cannot fail to please the ear and benefit the heart of him or her who hears aright—to draw the thoughts away from earth and lift them above, even to those blissful regions of perpetual spring, where are heard purer, sweeter and more thrilling strains, than was ever heard by mortal ears.

"The song of the wood-thrush," says Mr. Audubon, "although composed of but few notes, is so powerful, distinct, clear and mellow, that it is impossible for any person to hear it without being struck with the effect it produces on the mind. I do not know to what instrumental sounds I can compare these notes, for I really know none so melodious and harmonical."

He has two other modes of song which are not mentioned by Wilson; the first consists of three or four singular and rather plaintive notes, of a similar sound, which seem to come partly through his nostrils; although they cannot be compared with those of his best song as to clearness and melody, yet they are pleasing to hear, and the more so the nearer you are to the musician; the other is composed of only two notes—a higher and a lower; but these are loud, clear and melodious; the lower note is sometimes sounded first, but more frequently the higher. He has also a low, chirping note, peculiar to himself, which he frequently uses.

Dear reader, is your heart sad? Are you weary of the world, or of your own inclinations? Does your spirit long for a nobler, truer life than

this! Go forth into nature's sanctuary, the green woods, in the dewy morn or at evening's twilight hour, and listen to the song of praise offered by this sinless worshipper to the great Creator, and if you have a *true, earnest* and *persevering* desire in your inmost soul that you too may offer, from a heart as free and joyous, a song as pure and acceptable to the Infinite God as does this innocent warbler, that desire will surely be gratified; if not fully granted in this life, *yet it will be hereafter*. S. L. WHITE.

Groton, May 18, 1855.

For the New England Farmer.

THE CULTURE OF RAPE OR COLE.

This plant, which belongs to the cabbage family, is extensively cultivated in many parts of Europe, both for the seed, from which an oil is expressed, which is used for the purpose of illumination, and for the succulent food which it yields in great abundance, at a season when other fodder is usually scarce. Its thick leaves and stalks are much relished by cows and sheep, and are very nutritious. I know no reason why this plant should not be extensively cultivated by our milk-raisers. Indeed, it appears to be the very article they need, upon which to feed their cows in June and July, before the green corn is large enough to begin to cut. The seed, if not used for its oil, is probably, when ground, quite as valuable as linseed meal for feeding cows. It is coming into extensive use for this purpose in Germany and England. Large quantities are annually imported into this country, at an expense of $3 or $4 per bushel, for feeding cage birds.

There are two varieties of this plant. One called the colra, has its leaves covered with short hairs or bristles, while the leaf of the rape is smooth. The rough-leaved variety is said to be the most productive. The rape is a biennial plant, that is, it is sown in one season, and matures its seed in the following season, like winter rye and wheat. It is cultivated, sown broadcast, or in drills. The latter method is decidedly the best. It requires a good soil, such as would produce good crops of barley or wheat. The soil must be thoroughly worked and pulverized, and well manured with compost. Ashes is found to be an excellent manure for it, and very much to increase its product. The seed should be sown in drills in a bed, early in August. The bed should be prepared with the spade and made rich. They should not be sown too thick. Land from which barley or wheat has been taken may be prepared by thorough plowing, manuring, and harrowing to receive the plants.

The plants should be transferred from the bed to the field in which they are to grow, in September and October. When this crop is cultivated on a large scale, it is usual to make a furrow with a small plow, and against the upright side of the furrow place the plants about ten inches apart, and then by a return of the plow throw the soil again into the furrow, and then with a hoe level the earth and press it against the plants by the foot. They are then left until the following spring, when, if the rows are sufficiently distant, a plow may be passed between them, and the weeds carefully removed by the hoe and the fingers, or the wheel-hoe may be used instead of the plow. This will allow the rows to be placed nearer to each other than when the plow is to be used.

When the crop is to be cultivated on a small scale, it is usual to use a dibble or small spade. This is inserted into the ground, and by bearing the handle towards the body, a wedge-shaped opening is made, into each end of which a plant is inserted by a boy. The spade is then withdrawn, and the earth is pressed around the roots of the plants. The plants should be raised carefully from the bed in which they are started, by a fork, and with as much dirt as possible adhering to their roots, laid into baskets, and handled with much care when they are inserted into the ground. If the plants are watered with night-soil steeped in water, sink drainings, or other liquid manures in the spring, they will become extremely luxuriant. They should be kept free of weeds, and the earth frequently stirred around their roots. The lower pods are apt to become ripe, before those on the topmost branches. When most of the pods are ripe, it should be cut while the dew is on it, and laid upon sheets, or upon a wagon with a tight bottom; after lying one or two days in the sun, or on the barn-floor where the air can have free access to it, it is threshed, and the seed spread upon a floor and frequently stirred to prevent its heating. It is common in Germany to thresh it on sheets in the field. Cattle and sheep are very fond of the pods and small branches broken off in threshing.

The above are the principal facts connected with the culture of this plant in Europe. Experience will determine how far European methods require to be varied to suit our climate. Who will make an experiment in its culture this season, and report, a year from next fall, the results? Seed may be obtained at Wilson, Fairbanks & Co.'s, Hanover Street, or at most of the wholesale druggists, or at the seed stores.

Concord. J. R.

For the New England Farmer.

POULTRY, &c.—No. I.

MR. EDITOR:—I have been requested several times to state how I manage laying hens when shut up, and with your leave I will do so through the medium of the *Farmer*, if you think any benefit will be derived thereby.

First, a good dry shelter or building, with a southern aspect, with yard one rod of land at least for ten or twelve hens. Second, their food should be corn and oats, in equal quantities, by them always; also fresh water, pulverized oyster shells and gravel, where they can obtain them when they require; they should have meat three times a week, or beef scraps, that can be obtained of the tallow chandler, one pound of the former or half a pound of the latter, and as often should have raw vegetables, such as cabbage, potatoes, carrots, and grass in summer and hay in winter. Third, keep no rooster.

To obtain the greatest amount of profit from a hen-yard, I am of opinion, from a fifteen years' experience, that more eggs can be obtained at a less relative expense from twelve hens, or a less number, than from a larger one, when yarded together. Never winter a fowl twice, but kill

off at the time they begin to shed their feathers, and supply their places with laying pullets. In the selection of pullets, get a good yellow-legged fowl, of medium size, (avoid large ones,) and make no inquiry about the breed. Setters should be shut in a lattice coop, open on all sides, and remain in the enclosure with the rest, and have plenty of food until she leaves the nest, when she will soon lay again.

The greatest nuisance that I have to contend with, and which I think is the cause of more failures in the management of poultry than all other causes combined, is the vermin, or ticks, that infest their roosts in warm weather. Many doubt their existence because they could never find any upon their fowls. When they get into a building, it is next to an impossibility to eradicate them. Various means have been tried to exterminate them, and all have failed because of their tenacity of life and small size. It is useless to expect profit or pleasure while these pests are allowed to increase. As they do not remain upon the fowls any longer than to fill them, something must be done to keep them under in warm weather, and I have found nothing better than the following: Have a smooth roost, and nail a lath or two to the under side of the same, to cover cavities previously made with an inch auger, where they can secrete themselves when filled; then, once or twice a week, carry out the laths and saturate them with boiling water. Another remedy is to smear with poor oil once a week, or oftener if necessary. Every person who has a family should keep half a dozen laying hens; they will eat every thing that a pig will, and, if well cared for, are more profitable.

Concord, May 12, 1855. H.

IT WILL SAVE TIME.

We have always been advocates for the introduction of new machines and implements, for the purposes of husbandry. We have often echoed the popular remark, "*It will save time.*"

It has sometimes occurred to us, that this thought deserved a more careful consideration. What is the object of saving time? Would it be better for us all, if we could have our labor performed entirely by steam and water-power, and that we should be exempt from physical toil? certainly it would not. A certain amount of labor with the hands, as well as the head, is essento health and energy of character.

Again, in a community where the laborers, as in the Southern States, are ignorant, so that they could not give their time to reading or writing and the cultivation of the mind generally, exemption from labor would be followed by the worst consequences.

In our New England cities, even, were employment suddenly to cease, though abundant means of sustaining life were provided, we should at once have among our citizens a most dangerous element, in a class unemployed in their accustomed labors, and without the resources to preserve them in a life of leisure.

It seems, then, that however desirable we are in the habit of thinking a life of leisure to be, it is not so under all considerations. *Whenever the time exempted from labor is occupied in the cultivation of the mind and heart, then is such time truly saved.*

The mechanic, who by the aid of machinery, or by double effort, finishes his day's work, so that he has a long evening which he devotes to the drinking saloon, or card table, has saved no time. His condition would be better were he at his task till bed-time, at his bench or anvil. The farmer, who on an easy soil, can earn his week's support by a day's labor, and give all his leisure to horse-racing and gambling, has saved no time. A hard soil and a small return would be a blessing to him, if they kept him from evil companionship.

But when society has reached that condition, as it has in most of New England, that our young men and women are really desirous to improve their minds; when they have arrived at the period, that they desire to increase their knowledge, and will devote their leisure hours to books and the elegant and innocent recreation of music and lectures and refined conversation, then a partial exemption from toil has become truly a blessing. Severe bodily labor is hardly consistent with the highest intellectual cultivation. To be be more explicit, it is rarely possible for a man to devote many hours in the day to hard work with his hands, and in the same day perform much labor in study, while considerable physical exercise daily is essential to intellectual as well as bodily health and strength. Undoubtedly, most of our farmers, in the summer months, work too hard for the best exercise of their mental powers. Ten hours of labor under our hot sun, in the field, is too much of a tax on one's vital energies to allow him to be a severe student the remainder of his waking hours.

Then let us endeavor to *save time.* Let us make use of plows and harrows of the most approved form. Let us introduce mowing machines, and horse-rakes, corn-shellers and potato-diggers; let us make the wind draw our water, and the water drive our machinery, and the steam take its place at the wheel. Let us, by all means, here in New England, where men desire knowledge, and know the value of leisure, do all we can to lessen human toil.

Time saved from bodily labor, and given to education, is time indeed saved, and there is a reciprocal action which is working wonders in this direction, and which is daily tending to relieve the laborer.

The farmer or mechanic feels the value of time. He finds it necessary to have some hours for study. He finds the labor of swinging the

scythe too hard. He sets his wits at work, and the mowing machine is invented, and his horses, with a tenth his own former toil, perform his daily task. And so of all other labor-performing machines. They merely illustrate how much better is the mind than the body—how much better educated labor than mere brute force.

For the New England Farmer.

COUNTRY FARMERS AND CITY MECHANICS.

HEALTH.

"How's your health?" is one of our first salutatory expressions as we meet our friends; though I hardly know why it should be so, when so few of us seem to care for health so long as we are getting rich. If money can be made rapidly in any business or place, few stop to inquire into its healthiness. If large wages are offered by the factory or shop, who cares for the poisonous dust that may ulcerate the lungs, for the cramped position that may inflame the liver, or for the heated atmosphere that must debilitate the whole system? The love of life is said to be one of the strongest instincts of human nature, but the preservation of health seems to be one of the last objects of our concern. We follow fashion in dress and diet, and run the race for wealth utterly reckless of the dangers to which we expose our health.

It is, therefore, with faint hopes of doing good that I commence this article. When I was attempting to show that, notwithstanding all the glitter of large wages in the city, mechanics here in the long run actually come out poorer than farmers in the country, I expected to be heard. But now that my subject refers to the comparative health of the two classes, who will read? Besides this general indifference, there is no chance for argument. There is no body to dispute with. Every body that thinks at all admits farming to be "rather" the most healthy—every body knows that in-door confinement is less favorable to the development of the physical man, and to long life, than out-door exercise; that caged men and caged birds are inferior to those who enjoy the open fields; that men who work in the shade, like potatoes which grow in the cellar, have a sickly, unnatural look, and are in fact sickly, unnatural things. The fact, then, being admitted, we have only to consider the magnitude or degree of this difference:—*How much more healthy is the farmer than the mechanic?*

Fortunately we have the means for a reliable answer to this important question. The Secretary of the State of Massachusetts compiles an abstract of the returns, which by law are required to be made to him, by each town in the State, of Births, Marriages, and Deaths. This abstract is published annually. These statistics are probably collected and arranged with greater care and accuracy than any others of the kind in this country. The Twelfth Annual Report, or that for 1853, is before us. We make a few extracts from "Table X.," which gives the result for nine years and eight months, of persons who have died over twenty years of age—those dying younger are not included. From something over seventy occupations into which "mechanics" are divided, I have selected the following from among the leading kinds as to numbers.

Occupations.	No. of Deaths reported.	Average Age at Death.	At 20 yrs. old, may expect to live—
Agriculturists	7,735	64.03	44.03
Carpenters	1,127	49.41	29.41
Shoemakers	1,839	43.10	23.10
Blacksmiths	541	51.62	31.62
Painters	275	42.00	22.00
Masons	273	48.32	28.32
Machinists	268	37.15	17.15
Tailors	192	43.87	23.87
Operatives	173	33.17	13.17
Printers	91	36.46	16.46
Hatters	88	53.87	33.87
Tinsmiths	52	41.44	21.44

In the table from which the above is extracted, the deaths of 7,781 mechanics of all occupations are reported, (forty-six more than of farmers,) whose average age is exactly forty-six years, while that of farmers is a fraction over sixty-four years—or a difference of eighteen years in favor of agriculture. Accordingly, at twenty years of age, a farmer may expect to live forty-four years; a mechanic only twenty-six. But there appears to be a great difference in the health of the various occupations. Carpenters and masons who work much in the open air, live nearly 50 years, while machinists, operatives and printers fall considerably short of 40 years.

But it is not my intention to go into the details of this subject. My object is simply to urge the many farmer's boys who are seriously thinking of leaving the farm for a trade, to take into account the subject of health, as well as that of wages. I judge you, boys, by myself when I say that you do not do this. When I was making up my mind to be a mechanic, I compared the ten dollars a month of the farmer with the ten dollars a week of the mechanic—the hard work and exposure to heat and cold, to dust and mud, of the one, with light work and comfortable shelter of the other, without looking the fact in the face that,

Farmers at 20 years of age may expect to live					44	yrs. longer.
Machinists	"	"	"	"	17	"
Printers	"	"	"	"	16	"

Yet such is the fact, as appears from the published returns of deaths in Massachusetts for the last ten years.

Nor is this all. Short life is not the only penalty for violating the laws of health; but all the ills "that flesh is heir to" when abused, follow close upon the heels of the transgressor. To wear out in twenty years a constitution that was made to last forty, requires no small amount of headaches and foul stomachs, of darting pains and twitching nerves. The full-blooded, stalwart country boy is not transformed into the pale, debilitated, city mechanic, without admonitory remonstrances of his physical system, by pains and lassitude, that ought to be heeded as "warnings," but which he too often attempts to allay by stimulants. And here, by the way, we find perhaps the reason of a fact that has excited some wonder, viz: that the more unhealthy and short-lived any class of mechanics, the more dissipated they are. The causes which shorten life produce a condition of the nervous system that can scarcely be endured, but which stimulants will for the time being greatly relieve. Glass-blowers, printers of morning papers, and others who work

nights, as they rouse themselves from their morning nap, experience feelings of real misery, which, if they were not the result of a criminal abuse of health that ought to be abandoned at once, would seem to justify them, if any thing can, in taking "a little something" to steady the nerves and to wake them up. The doctor has no patient that needs it more. Here is indeed a real "case of sickness." But as the remedy touches not the disease, the patient finds that the more he doses the more he must, to keep comfortable. Poor fellow, what are large wages to him, now that his medicine has become his master!

Since I commenced these articles, one correspondent of the *Farmer* has asked, and probably a great many readers have thought of asking, Why do not city mechanics oftener try farming, if all I say of their hard lot is true? There are undoubtedly many reasons for it, but the want of sufficient health and strength is the most conclusive. Look at a sedentary city mechanic,—a jour. tailor, jeweler, engraver, or painter,—what can he do at farming? His hands are small and delicate, his sinews are unstrung, and every way his physical system has become unfitted for farming, in proportion as it is fitted and conformed to the necessities of his trade. He can perhaps sit all day long bent nearly double, and by much practice he can ply the needle, the brush, or the graver, with wonderful dexterity: but give him an axe or a scythe, or set him at the plow or at building fence, and you will soon discover a satisfactory answer to the question proposed, and see why it is very dangerous if not very foolish for such mechanics to attempt the realization of their agricultural dreams, although the distance between them and Kanzas "lends enchantment to the view."

We close this article with a brief summary of our argument. Mechanics live some eighteen years less than farmers; many are half dead while they do live; and their systems often become so conformed to the peculiarities of their business that they are good for nothing else, and consequently cannot return to the farm if they are ever so well satisfied that they made a mistake in leaving it and becoming

Boston, May, 1855. A CITY MECHANIC.

For the New England Farmer.

THE OAKES COW.

FRIEND BROWN:—The life-like picture of the most celebrated cow of New England origin, together with the facts of her history, contained in the *Farmer* of Saturday last, are the most satisfactory answers that can be given to the inquiry, "What is a native cow?" In view of these facts, there are a few who will presume to deny the right of this animal to this appellation.

I have been not a little surprised, in looking over the returns of our several Agricultural Societies, to see with what avidity all facts tending to magnify the importance of imported breeds, are seized and published. There is a sort of aristocratic consequence connected with these, not unlike that claimed by the higher classes of citizens in our cities and villages, which keeps at a distance those of humbler origin. In an elaborate report on stocks, from the county of Bristol, contained in the volume of *Massachusetts Agriculture*, recently published, the writer, after running down the Devons (first introduced to our shores by the Plymouth pilgrims,) to the lowest point of degeneracy, remarks, "our native cattle are not without great merit." If it be true that, amid all the deprivations and hardships they had to encounter, they still retain "great merit," why deny them the power of perpetuating their own characteristics? This power is claimed *exclusively* for animals recently imported. Is there not something arbitrary in this pretension? I have not in mind so distinctly the history of these races, as to speak with entire confidence; but, judging of a New England cow as I would of any other class of animals, I should say, under a proper care and keeping, with due regard to her associates, she would be as likely to rear a good calf as any other breed of animals. Possibly she may have been so overfed, to increase her milk, as to impair her procreative energies; but such overfeeding does not in the least impugn the principle for which I would contend. Equality I readily grant to foreigners—superiority never.

REMARKS.—As we understand it, purity of blood comes from long and careful breeding of the same type; if of Devon, then of the best blood of the Devon, on both sides, for several generations, and so of any other breed. Our common cattle are a mixture of various breeds, but that this mixture is not as profitable stock for us as any of the pure breeds, we are not ready to assert.

For the New England Farmer.

SHORT HISTORY FOR YOUNG MEN.

MR. BROWN:—Having been a constant reader of the *N. E. Farmer* for the past twelve months, and having derived a great deal of information from its pages, I have come to the conclusion that my two dollars was a good investment, and that myself and family cannot well dispense with its weekly visits. You will find enclosed two dollars for another year's subscription.

Having seen several times in your paper the contrast between country and city life, some of the circumstances mentioned have applied very nearly to my own case, so much so, that I take the liberty to write a few lessons that I have learned.

When I was eighteen years of age, I had become pretty tired of working on my father's farm, and being pretty well tickled up with the fine stories and fine clothes that some of my acquaintance had brought from Boston, I came to the conclusion that farming was not respectable enough, and would never do for me, and that I must at some rate or other live a city life of independence. All the persuasions and threats of my father were of no avail; go to Boston I must, so my friends concluded to let me try it. In 1840, I found myself in Boston, without any other occupation than to take my chance as a laborer at anything that should present itself for me to do; at this time business was dull, and had it not been for an acquaintance, I should have had to return home with disappointment; but at last, I

obtained a situation, not at $10, $15 or $20 per week, but at the sum of one dollar per day, and pay my own reckoning. This, thought I, at any rate, is better than digging on a farm for nothing, and besides, I am my own master. I formed a resolution to save my wages, be temperate, and show my relatives that in spite of their persuasions I could live and gain independence in the city. Well, at the end of one year, I found my gains to be about 0, having lost all of my wages by my employer becoming bankrupt. I had taken up barely enough of my earnings to pay my board and purchase a few clothes, &c. This did not exactly agree with my notions of city independence, for I had worked harder than ever before, spent no money needlessly, and was not so independent after all, but what if taken sick I should find some embarrassments.

I began my second lesson by resolving to collect my wages as I went along, and continued to labor hard, and fare hard, at wages averaging about thirty dollars per month, for four years, occasionally changing places as I thought for my advantage. At the end of this time I found my fortune to consist of about 0, after accommodating a friend with $140 which he absquatulated with, and paying doctors' bills, &c. All of these expenses I found higher than such usually are in the country among one's friends. This ends lesson second—two rather costly lessons, for me, at least. This I found brought independence and myself farther apart than when I left *home* and the *farm*. At the end of seven years, I found myself hobbling about the streets on crutches, having had the misfortune to have one of my legs broken, about fifty dollars in debt and no means to pay, with a wife and child dependent on me for support. Here was a nut for me to crack, which seven years before I had not thought of.

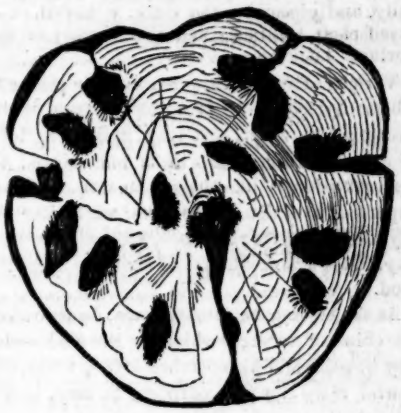
With the help of my friends I now obtained a situation upon the city night watch, where by watching when a hard-laboring man needs rest, and doing a hard day's work every day, I managed to earn sometimes as high as the $15 or $20 per week, spoken of in your paper as one of the rare chances which are seldom met with in the city. I lived in this way for three years, doing two days' work every twenty-four hours, with occasionally a fit of sickness, and some of my family sick much of the time. The doctors informed me that if I wanted to save my wife or children I must remove them to the country. Here I was in a fix! What! go into the country and work on a farm! But the welfare of my family was at stake, and something must be done. I had managed to lay by $550, and with that I came to the country, purchased a farm of 140 acres for $1000, with good substantial buildings, mostly new, paying $500 down, and experimenting upon the mortgage system for the balance. Here I took my family in 1853, hired a man, and returned to the city myself, where by incessant labor night and day, and a little speculation for one year, I managed to use myself about up, and earn $600, with which I purchased young stock and farming tools, paid $300 more towards my farm, took up the mortgage and gave my note for the $200 remaining. I then went to work upon my farm, completely satisfied with strivin for independence in Boston. Although it was mostly new work for me, still with the advice of my neighbors, and occasional hints from your paper, and a few books which I read eagerly, I get along very well. If I have occasionally a hard lift, or a hard day's work here, I can remember hundreds such during my *independent city life*.

All that I have to say in conclusion is, that I have at last overtaken independence, not in Boston or any other city, but in the blessed country, in the most honorable, healthy and natural occupation of man. I have now paid my debts, and am at last a free man.

BENJAMIN F. MITCHELL.

Mt. Vernonville, Me.

THE APPLE TREE BORER.



We heard many complaints last year of the ravages of the apple tree borer. In some cases the injury inflicted was said to be very extensive, and as no remedy appeared to be effectual, the only course seemed to be to let the enemy have its own way. The borer is, indeed, a difficult foe to contend with, as its ravages are committed out of sight. Its eggs are deposited in the bark of the tree, generally, but a short distance from the ground, and there produce a whitish grub, or maggot-shaped progeny, which begins immediately to perforate the tree, pursuing its course along between the bark and the sap wood, or in the sap wood itself, and often passing up so many times as to weaken and finally destroy the tree. In a long article on the subject in the *Ohio Farmer*, we find the following paragraphs:

What is the Borer? The Borer is the larva, or grub which is hatched from the egg, of a beetle, belonging to the family of Buprestidæ, or, Buprestians. The beetle itself is about half an inch long, with brown and white stripes, and flies at night.

When does it lag its Eggs? In the latter part of May, and first part of June, it pierces the bark of the tree with its spear, and deposits its eggs under the bark. This it does near the root of the tree, in perhaps the greater number of cases, especially in small trees. Indeed some writers, whose observations seem to have been confined to

one or two classes of operations performed by the beetle, state that it deposits its eggs *only* at the root of the tree. This is a mistake. We have dug them within the last few weeks, from all parts of the trunk, from the ground to the branches; they seem to have a special liking for those parts of the tree which are decayed. On the south-west side of the trees where the sun has scorched the bark or the wood beneath; also where the bark has been bruised by cattle, or in any other way; also where the tree is naturally weak, and shows signs of early withering and death—wherever any or all these inducements are offered, the beetle seems quite ready to accept the invitation, and make its investment. Let no one imagine, therefore, that his trees are free from the borer, because he finds none about the *roots;* let him examine all parts of the trunk carefully, and especially the weak, wounded, or decayed parts. He may find them in any of these portions of the tree.

Various remedies are prescribed for preventing the moth depositing its eggs on the trees, such as strong potash water, soft soap, and strong tobacco water, &c.; but when it is remembered that the bark of trees, like the human skin, has a very important function to perform, we believe that any thick adhesive substance, like whitewash or clay, is always productive of far more harm than good.

As the borer penetrates the tree, he throws out the chips or borings which he has made—these may be seen and his entrance found, when, with a wire fitted for the purpose, he may, in most cases, be destroyed. But a careful observer may detect the spot where the egg is deposited, even before a chip has fallen, and it is then an easy matter to destroy the eggs. This watchfulness, after all, must be the chief reliance of the farmer.

The engraving above, illustrating the ravages of the borer, is only one of a number we have preserved. It shows how destructive they sometimes become.

EVERY FAMILY SHOULD HAVE AN AGRICULTURAL PAPER.—It is worth more than it costs simply for educational purposes. Parents have hardly a right to deprive their families of its advantages in these times. Children will learn more, as they go to and from school, or drive the cows to pasture, or pick berries by the way, if their observation is quickened, by what they hear their parents read or talk over from the agricultural papers; and when they form habits of reading for themselves, such reading is both safe and useful. Reader, if your neighbor has no agricultural paper, persuade him to take one. Even if he is poor, he can better afford to take one than to do without it; for if he takes one, his chidren will be likely to be better off—to make a good home for themselves, and it may be for him in old age. Not all will have farms; but all will need to know something of the garden and the orchard at least; and we advise no parent, who feels that he may sometime be dependent upon his children, to bring them up without the means of instruction in rural economy. It should be regarded as essential in the education of any child, male or female.

THE BIRDS.

To HON. CHARLES L. FLINT,

SECRETARY OF THE MASSACHUSETTS BOARD OF AGRICULTURE.

SIR:—While fitting my corn-grounds to-day, and listening to the song of the prophetic "Planting-bird," your issued circular concerning *birds* came up to mind, and for which please to accept my grateful thanks. The accompanying verses followed my thoughts, and I take the liberty to forward them to you, hoping they will meet some answering chord in your breast.

BY THE "PEASANT BARD."

DEAR SIR:—I read your proclamation
With pleasurable admiration.
Ye printers, speed it o'er the nation!
May ye who read it,
Feel under sacred obligation,
When read, to heed it!

The birds! the birds!—what man may know
The vast amount of good they do?
E'en the poor bann'd and bandit crow—
(WEIT calls him raven)—
Once fed a prophet, long ago,
By will of Heaven.

Now-days crows pull some corn, 'tis true;
They love it; so do I and you;
But grubs and worms they likewise view
With mouths that "water,"
And wage upon the vermin crew
Unflinching slaughter.

Please keep before the people's eyes
This truth, of every bird that flies:—
Far more of good than evil lies
To their account;
The evil's small; no money buys
The good amount.

How oft I've quit my toil, and run
To see what meant the "slaughtering gun;"
And if I found some valiant son
Of blood and Mars
Shot birds, his shirt-tail flag was one
Of "*stripes*," not "stars."

What songs with those of birds can vie?
From the bright gold-finch that on high
Swings its wee hammock in the sky,
To the dear thing
That nestles where the mosses lie,
And grasses spring.

How blessed 'tis to be awaking
To the bird-choir, when day is breaking!
When Phœbus is the west forsaking,
No fine-spun sermon
Like theirs, could o'er my soul be shaking
The dews of Hermon!

This bright May morn, from shaking spray
Yon bird outpours his PLANTING lay,
How sweetly, naively sociably,
As late I heard
A dear-loved friend—God bless her?—say,
And save the bird!

Sir, count me ready to abet
You, in the work to which you're set.
I'm loth to speak or pen a threat,
But loafing rowdy
Who kills birds on my farm, will get
Especial "goudy."

Yours most heartily for the birds,

JOSIAH D. CANNING.

For the New England Farmer.

CHEAP FERTILIZERS.

Mr. Editor:—Reflecting upon the wide spread and rapidly increasing mania for foreign manures, which has taken possession of the farming community of New England, the inquiry has often risen in my mind whether, in the far off search for the means of fertilization, there is not a very considerable sprinkling of humbug, such as developed itself in the morus multicaulis, rohan potato fevers, &c. Can it be that our resources are exhausted, and that we are reduced to such naked poverty in respect of our agricultural operations, that we must needs look to the distant isles of the ocean, or the scientific combinations of the chemist, for the essential elements of fertilization? To answer (as numbers virtually do) this question in the affirmative, implies, as it appears to me, a very imperfect knowledge of the essential conditions of agricultural economy, while the practical application of the theory infers the total neglect, or very partial appropriation, of materials which nature has placed in abundance within our reach. Such neglect is an error which lies at the doors of nearly the whole farming community.

The primary want of the farmer, at least here in the older States, is manure. From whence, and by what methods, can this be most readily obtained, is the problem which he is required to solve. The method now very generally proposed, next to the old established appropriations from the barn, &c., is the purchase of outlying materials, whether in the shape of guano, poudrette, or phosphate of lime, &c. Now is this wise husbandry? I think not. And furthermore, I am fully persuaded that those who adopt this method are chasing an ignis fatuus, while the substantial good, which they want is within their reach, is wasted and lost. With me this rule has all the force of an axiom, namely, that no person should undertake the cultivation of more land than he can enrich sufficiently from his own resources. Or, to state it in another form, there are placed within the reach of the farmer ample materials to fertilize all the land which he can fully and profitably occupy.

It is a law of our existence, which we can neither alter or set aside, that all which we abstract from the earth we must return to it again in some form or other. But although the law itself is absolute, the methods of its fulfilment are essentially within our control. The debt we owe the earth must be paid, but it is for us to determine whether it shall be paid in such a manner as to beautify and adorn its surface, or in such a way as to multiply its pollutions and increase the sum of human suffering. It is ours to determine whether the enormous amount of exuviæ, evolved by our great cities, shall be suffered to stagnate, saturating the ground and becoming the dismal parent of every disease, or returned with a wise hand to the earth in such a manner as shall invigorate the vegetable world and reproduce new forms of beauty and usefulness. It is for us to decide whether the morbid matter of our households shall stagnate in sinks, drains, &c., creating cesspools offensive to every sense, or poured into the open bosom of the soil to multiply all that ministers to our physical comfort. There has been much written and said, of late years, concerning the value of liquid wastes, but, as I am inclined to think, with a very inadequate idea of their intrinsic value, or of the most judicious and effective method of employing them.

Generally, even those who have been most strongly impressed with the importance of liquid wastes, have devoted their attention to the discovery of the best absorbents, with a view to their application to the earth in a solid form. And herein I think they have, to some extent, fallen into error. As compared with the old wasteful habits of discharging tons of liquid refuse, upon a few wheelbarrow loads of loam, through the sink, or pouring it into some inaccessible stone pit, their efforts are entitled to high praise as valuable improvements; but as contrasted with their immediate application to the soil, in a liquid state, whenever this is practicable, they must still be pronounced rude and imperfect.

Liquid manures are vastly more efficacious than solids in their influence upon vegetation, and the reason for this must, we should suppose, appear obvious to all who give the subject a moment's thought. Liquids are already in the condition which solids must assume before they can become the food of plants. Nothing can become food for plants except in a state of solution, and liquids are exempt from the waste from atmospheric influence which takes place with solids. A very simple experiment will settle the matter satisfactorily. Let any quantity of solid manure be steeped fully in water, and the solution applied either to a garden, or grass, and the same quantity be applied to another piece of equal size, in a solid form, and the effects of the former will be to the latter as three to one.

If I have not already trespassed on your patience, perhaps I cannot better illustrate these views than by the relation of some experiments of mine made during the last three or four years upon this subject. In the early part of my farming experience I was much perplexed with the general, and occasionally with the total, inefficacy of solid manures when applied as a top-dressing to grass land. Keeping no team, and not being in a condition to expend much for plowing, I looked about for a remedy. I had had some experience of the powers of liquid manures applied around fruit trees and determined to test them in relation to grass. I procured a convenient vessel for the purpose and caused every species of waste liquid to be thrown into it, and once or twice a day spread it methodically upon my land. The piece I selected was good land, but so exhausted by long cropping that the year previous I hardly considered it worth mowing. Now for the results. The next season the hay on that piece was more than quadrupled. I then began to put my ashes into the same receptacle and commenced a regular course of action, extending from the last of July to the last of May.

In this way, without the loss of an hour's time, or a cent of outlay, I have produced results which could not be wrought by thirty horse loads of solid manure accompanied by days or even weeks of severe labor. In this way I can manure in the most effectual manner upwards of an acre and my land thus treated will produce three ton to the acre, although it has been in grass for

teen years, and without addition of seed.—This method, of course, has its limitations. It would not be available in the case of lands lying distant from the house; but for those immediately contiguous I say confidently that it cannot be excelled. Every housekeeper of five persons produces annually several tons of this material, and those who understandingly avail themselves of this powerful resource will find little occasion, it seems to me, to use Bomner's patent, guano, or any other extraneous manure. WM. WHITING.

Pembroke, Mass., 1855.

WHAT DOES IT COST TO FENCE THE COUNTRY?

The amount of capital employed in the construction and repair of fences in the United States, would be deemed fabulous, were not the estimates founded on statistical facts, which admit of no dispute. Burknap, a well known agricultural writer, says:

"Strange as it may seem, the greatest investment in this country, the most costly productions of human industry, is the common fences, which divide the fields from the highways, and separate them from each other. No man dreams that when compared with the outlay for those unpretending monuments of art, our cities and our towns, with all their wealth are left far behind. You will scarcely believe me when I say that the fences of this country cost more than 20 times the amount of specie that is in it."

In Germany, and many other parts of Europe, no fences are seen for miles, either between the highlands and fields, or between the lots occupied by different individuals. In some districts, the boundaries of each proprietor are required by law to be marked by trees, and the owners are compelled to plant fruit and ornamental trees upon the line of highways against their land, at prescribed distances, and kept constantly growing. Public officers, at stated intervals, examine and survey the streets and public ways, and report to the public authorities any failure of compliance with these legal provisions. In some parts of Germany, the highways are lined for miles with rows of fruit trees, bending with fruit over the passing traveller, adding grace and beauty to the landscape, and refreshing him with grateful shade.

There seems to be in this country a mania for fences. Not only are our fields and pastures enclosed, but divisions and subdivisions of our farms are made, and in addition to these, small yards and gardens, close about our buildings, are often multiplied till they mar the whole beauty of the homestead. This is particularly noticeable about old establishments. The first occupant enclosed a small garden, and after it had grown up to trees, he fenced off another for his vegetables. Then, from time to time, a small yard for poultry, another for the calves, another for the house, a barn yard, and so on, not omitting a front yard, follow, until an acre or two of the best part of the farm is cut up like a chequer-board, having neither utility nor beauty to commend it. By and by, the old farm changes hands, and the old rubbish is cleared away, and a sudden and almost magical change occurs in the scene. We see, at once, that system has taken the place of accident and caprice, and good taste has triumphed over conformity to old-fashioned notions of convenience.

We believe that, as a matter of economy, a great change is required in the matter of fences in New England. Fences are for two purposes, *protection* from cattle and sometimes unruly boys, and *shelter* from the wind and cold. In the first place, we believe, that nearly all fences between the highways and our fields, might be dispensed with. But what, then, shall protect us from cattle wandering at large, and from droves passing to market, and to and from pasture?

As to droves of cattle, they are soon to cease. The railroads convey them, nearly all, and if they are still to travel by means of their own locomotives, how much more reasonable would it be to compel their owners to drive them in yokes, or secured by ropes, or otherwise, than to insist that the owners of land shall fence them out a road from the place where they are raised, to the market towns. As to the cows and oxen, kept for use on our farms, they might easily be conducted in the same way to and from their pastures. Our pastures must still be enclosed. There is much rough land that can profitably be used for no other purpose. But the saving, in dispensing with the fences about our fields, would be immense. No amendment of the law of the New England States, generally, we apprehend is necessary. Owners are not now obliged to fence against cattle in the highways, but persons driving or suffering their cattle to run loose in the road, are bound to see that they do no injury. All that is needed is, that public opinion, which rules everything else in our country, should be set right on this subject.

As to *shelter* from the wind and cold, we apprehend that a rail fence or a stone wall around a field, affords but very little. For gardens and fields even in exposed positions, shelter is often necessary, and fences may sometimes be profitably constructed with this view. Generally, however, a judicious planting of belts of pine or hemlock trees, on the northerly and westerly sides of our lots, will be found far more effectual and economical than anything else, except for very small enclosures.

We see many subdivisions of farms, which seem to us worse than useless. Fields are often divided into two, three, five or ten acre lots, which had much better remain in one. This is

often done for convenience in fall feeding, so that cattle may be turned into the fields, before the crops are off, in the fall. Our answer to this is, that this whole system of fall feeding on fields is an error. We believe that it is a fair estimate, that a good mowing field will, without being fed at all, keep in grass better for ten years, than it will *five* if annually fed closely, late in autumn. Soft lands are almost ruined by the treading of cattle, and the short bulbous roots of the herds-grass are pulled up and destroyed by the feeding of neat cattle, that are not provided by nature, with teeth enough to cut the grass evenly. It is better economy to feed our cattle at the barn in the autumn, than to allow them thus to injure the crops of future years. We would advise farmers, therefore, rather to remove the division fences which they already have in their fields, to escape the temptation to do what they know to be wrong, than to construct others, for convenience in feeding their cattle in their mowing fields.

If a fair estimate could be made of the actual cost of maintaining our unnecessary fences, and of the waste of valuable wood and timber used about them, so that each farmer should know the amount of his tax annually for this object, we think a great change for the better would soon occur.

THE BATTLE OF THE ANTS.

I was a witness to events of a less peaceful character. One day when I went out to my wood-pile, or rather to my pile of stumps, I observed two large ants, the one red, the other much larger, nearly half an inch long, and black, fiercely contending with one another. Having once got hold they never let go, but struggled and wrestled and rolled on the chips incessantly. Looking farther, I was surprised to find that the chips were covered with such combatants, that it was not a *duellum*, but a *bellum*, a war between two races of ants, the red always pitted against the black, and frequently two red ones to one black. The legions of these Myrmidons covered all the hills and vales in my wood-yard, and the ground was already strewn with the dead and dying, both red and black. It was the only battle-field which I have ever witnessed, the only battle-field I ever trod while the battle was raging; internecine war; the red republicans on the one hand, and the black imperialists on the other. On every side they were engaged in deadly combat, yet without any noise that I could hear, and human soldiers never fought so resolutely. I watched a couple that were fast locked in each other's embraces, in a little sunny valley amid the chips, now at noon-day prepared to fight till the sun went down, or life went out. The smaller red champion had fastened himself like a vise to his adversary's front, and through all the tumblings on that field, never for an instant ceased to gnaw at one of his feelers near the root, having already caused the other to go by the board; while the stronger black one dashed him from side to side, and, as I saw on looking nearer, had already divested him of several of his members. They fought with more pertinacity than bull-dogs. Neither manifested the least disposition to retreat. It was evident that their battle-cry was Conquer or die. In the meanwhile there came along a single red ant on the hill-side of this valley, evidently full of excitement, who either had despatched his foe, or had not yet taken part in the battle; probably the latter, for he had lost none of his limbs; whose mother had charged him to return with his shield or upon it. Or perhaps he was some Achilles, who had nourished his wrath apart, and had now come to avenge or rescue his Patroclus. He saw this unequal combat from afar,—for the blacks were nearly twice the size of the red,—he drew near with rapid pace till he stood on his guard within half an inch of the combatants; then, watching his opportunity, he sprang upon the black warrior, and commenced his operations near the root of his right fore leg, leaving the foe to select among his own members; and so there were three united for life, as if a new kind of attraction had been invented which put all other locks and cements to shame. I should not have wondered by this time to find that they had their respective musical bands stationed on some eminent chip, and playing their national airs the while, to excite the slow and cheer the dying combatants. I was myself excited somewhat even as if they had been men. The more you think of it, the less the difference. And certainly there is not the fight recorded in Concord history, at least, if in the history of America, that will bear a moment's comparison with this, whether for the numbers engaged in it, or for the patriotism and heroism displayed. For numbers and for carnage in was an Austerlitz or Dresden. Concord Fight! Two killed on the patriots' side, and Luther Blanchard wounded! Why here every ant was a Buttrick,—"Fire! for God's sake fire!"—and thousands shared the fate of Davis and Hosmer. There was not one hireling there. I have no doubt that it was a principle they fought for, as much as our ancestors, and not to avoid a three-penny tax on their tea; and the results of this battle will be as important and memorable to those whom it concerns as those of the battle of Bunker Hill, at least.

I took up the chip on which the three I have particularly described were struggling, carried it into my house, and placed it under a tumbler on my window-sill, in order to see the issue. Holding a microscope to the first mentioned red ant, I saw that, though he was assiduously gnawing at the near fore-leg of his enemy, having severed his remaining feeler, his own breast was all torn away, exposing what vitals he had there to the jaws of the black warrior, whose breast-plate was apparently too thick for him to pierce; and the dark carbuncles of the sufferer's eyes shone with ferocity such as war only could excite. They struggled half an hour longer under the tumbler, and when I looked again the black soldier had severed the heads of his foes from their bodies, and their still living heads were hanging on either side of him like ghastly trophies at his saddle bow, still apparently as firmly fastened as ever, and he was endeavoring with feeble struggles, being without feelers and with only the remnant of a leg, and I know not how many other wounds,

to divest himself of them; which at length, after half an hour more, he accomplished. I raised the glass, and he went off over the widow-sill in that crippled state. Whether he finally survived that combat, and spent the remainder of his days in some Hotel des Invalides, I do not know; but I thought that his industry would not be worth much thereafter. I never learned which party was victorious, nor the cause of the war; but I felt for the rest of that day as if I had my feelings excited and harrowed by witnessing the struggle, the ferocity and carnage, of a human battle before my door.—*Thoreau's Life in the Woods.*

For the New England Farmer.

THE PROFIT OF FATTENING SWINE.

In the Monthly *Farmer* for April, 1854, there are statements over my signature relative to the profit of fattening swine in New England, together with hints as to the proper mode of conducting the business; and in the following number for May, there is a shorter article, confirming the statements previously made. Since writing those articles, I have further investigated the subject, in order to prove the soundness or otherwise of the views then presented.

On the 21st of December, 1854, I bought four very lean shoats, weighing respectively, 63, 61, 60 and 58 lbs., or in all, 242 lbs., gross live weight. They were placed in warm apartments, consisting of a pen for making compost, and an eating room. The litter made by two horses was daily thrown into the compost pen; also, about every third week, a cord, or two loads of either muck or forest-mould was put into the pen; and clean straw was added, at suitable times, for bedding. The pigs were fed on meal made by grinding ears of corn, or on what is called corn and cob meal, and they were supplied with all the meal they would eat with a good appetite. Immediately after feeding them at a given time, the meal for the next feeding was placed in the bucket, and boiling water was added, and also after awhile the wash of the kitchen, the whole standing in a warm place till the time for feeding, and the meal becoming thoroughly soaked and very much swollen. Whenever a grist of ears of corn was to be carried to mill to be ground for the pigs, the same was accurately measured up in a basket, well known to hold the right quantity of ears, when even full, to make a bushel of shelled corn; and the pigs were charged with each grist at the time it was measured. Entire accuracy was aimed at in keeping the account with the pigs, and I know of no chance for a slip in the accounting.

The business was thus conducted till the 14th of the present month, when the pigs were sold to the butcher for eight cents per pound, dressed,—he charging three dollars for slaughtering the four. Between the dates above named, the pigs consumed seventy-six bushels of corn on the ear, equal to thirty-eight bushels of shelled corn. During this time they manufactured eight cords, or sixteen loads of muck and mould into the first quality of compost, mingling the raw materials well with the horse manure and straw for bedding. They may be accounted with as follows:

825 lbs. of dressed pork, at 8c. per lb		$66.00
Deduct 76 bu. ears of corn, or 38 bu. corn consumed, at an average price of $1.25 per bu.	$47.50	
Deduct paid for slaughtering	3.00	
" paid for pigs at outset, $3.00	12.00	62.50
Balance over market price of the corn		3.50
Add 8 cords, or 16 loads of raw material manufactured into compost, worth a bu. of corn, or $1.25 per load	20.00	
From which, if you please, deduct the cost of supplying the material, say 50c. per load, which is rather high	8.00	12.00
Profit on four pigs, over and above market value of corn consumed		$15.50

With regard to the price at which the corn is charged to the pigs, I have to say that in January the thirty-eight bushels could have been bought for a dollar per bushel; and at less than a dollar and a quarter as late as March, though now corn is worth more than the price charged the pigs.

It will be found on calculation that these pig gained some over fifteen pounds of net pork fo each bushel of corn consumed; which argue pretty well for the mode of feeding, and for th business of converting corn into pork and compost.

Another year's practice and observation has not disclosed any thing material for me to deduct from the views formerly advanced as to the policy and profit of fattening swine. I still entertain entire confidence in the desirableness of the business, when conducted with system and propriety. Indeed, I have never seen the year in farming when I was not well paid for fattening pigs of a good breed, fairly reckoning their services as manufacturers of fertility for the land. In my judgment, it is sounder practice for the farmer thus to add to his means for making crops and keeping his lands in good heart, than by buying the fashionable concentrated fertilizers of the day, which too often merely stimulate the present crop, and leave the land no better than they found it.

Notwithstanding the great prejudice existing with many persons against the grinding and feeding of the cob with the corn, it is sufficient for my purpose to know, as I do by repeated trials, that corn and cob meal, properly ground and cooked, will make from twelve to sixteen pounds of net pork for each bushel of corn consumed.

F. HOLBROOK.

Brattleboro', May 22, 1855.

THE JUJUBE-TREE.—The seeds of this tree were imported a short time since from the south of Eu-

rope for experiment in the south. It grows in the form of a shrub, of middle size, bearing a red oval fruit, about as large as olives, inclosing a stone of the same shape. They are sweet, but only eaten among us in the from of a paste. In Algiers the fruit ripens in the month of June, and is much sought after by the inhabitants, who consume large quantities, both fresh and dried, as well as in the form of a delicious paste.

For the New England Farmer.

CHARCOAL DUST.

Mr. Brown:—At one of the agricultural meetings at the State House, last winter, I was much interested by the remarks of the speakers; some new ideas, to me, were advanced, in regard to guano. But I was particularly pleased by the earnestness with which a more careful saving of "home manures" was urged, with which to form a fertilizing basis and furnish an absorbent for the gases. One of the most important agents for these purposes, in my experience, was but slightly alluded to, viz: charcoal dust. If you will permit, I will relate one of my experiments, and its results, with charcoal, and you, of course, will dispose of the statement as you deem proper.

In the winter of 1852 I carted off the top of a high knoll or ridge that extended through a piece of land I had recently purchased. My object was to bring the land into better shape and to put this heretofore barren spot into a state for cultivation. The cutting was from 2 to 6 feet deep, leaving a level plain of about half an acre, which was still elevated above the adjacent lands. The bed of this plat was coarse sand and full of "cobbles." Having on hand a lot of meadow muck, that had been decomposed with shell lime and salt brine, I took of this 40 cart loads, 10 loads sandy loam, 2½ cords of charcoal dust, and threw into a heap. Into this I put 15 barrels of liquid from gas works, working over the mass and mixing thoroughly. After standing four weeks, I distributed the heap evenly as possible over my piece. Then plowed and cross-plowed, to the depth of ten inches, and harrowed until the whole was well mixed with the sand bed, and sowed to oats, with timothy and clover, first week in June. The oats came up finely, grew stout, but were injured by rust. The grass was a poor catch and I again sowed and raked in seed in the fall. The following season, where the seed took from the first sowing, I cut a heavy crop of grass.

Last spring the grass had got well catched, started early, and was marked by its dark green and fresh appearance all through the dry season. I took off two crops of grass, both averaging 4 tons to the acre. During all the dry weather this spot did not seem to suffer in the least by drought, notwithstanding its high altitude, and while on low grounds in the vicinity vegetation was completely dried up. This good result I attributed mainly to the coal dust, for wherever I turned up the earth, on this piece, and found the greatest mass of coal, there I found the most moisture, and the grass roots seemed to possess a particular fondness to twine among it.

My faith in the utility of coal dust, for dry lands, has been strengthened also, by using it in setting trees. I have an elevated and sandy place, where I am desirous to grow a "belt" of evergreens, and for two successive years, after my utmost skill in setting, the trees would die out wholly or in part, seemingly from the effects of the hot, dry seasons. Last spring I again set out 50 Norway spruce, fir balsam, white pine, &c., dug large holes, and in part mixed in with the loam two bushels charcoal, bringing a portion of the coal near the roots of the trees. I used equal care in setting, but in the fall almost every tree, where no coal was put, was dead or nearly so, dried up. While every tree to which I applied the dust was alive and vigorous. I have also used charcoal in setting fruit trees, hedges, &c., in dry places, and am satisfied with the result. I am sorry that a more free use of charcoal dust recently, in this vicinity, has advanced the price of the article. Our colliers now charge $5 per cord, but think it will pay even at that price. A. R.

Lowell, March 1.

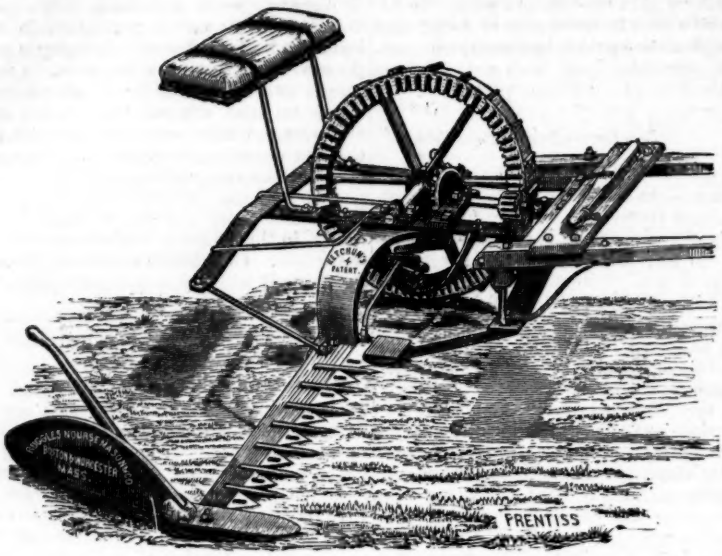
A HINT.

Friend Adams:—Permit me through the columns of your paper, to urge upon my brother farmers, the importance of turning their attention to the raising of roots more extensively for the purpose of wintering stock. The scarcity and consequent high price of hay, and grain, if there were no other reason, should induce every man in the state who has an acre of land or even less, to set apart a portion of it for that particular purpose.

I wish more especially at the present time, to call the attention of that class to the subject who do but little farming and who keep but a single cow or horse. It matters not whether he styles himself a farmer, mechanic, or merchant, or whether he belongs to any other class, he has a common interest with those who till the soil, and should co-operate with them.

I would propose to all such to plant one-eight of an acre of carrots, as soon as the ground is in a suitable condition to receive the seed, that is as soon as it is warm and dry. The labor of cultivation will be trifling and the amount of carrots if a fair yield, will be a hundred bushels or more. This would give a cow a half bushel per day—two hundred days or more than half a year. I have no doubt but the animal would be grateful, and the owner find his reward, I do not ask who will try it, but I do ask who will fail to do so.—*Granite Farmer.*

A Fact in regard to Drilling Wheat.—We wish to record a fact which seems rather remarkable in regard to drilling in wheat. We sowed about nine acres last fall, with one of Ross' Drills, and some three acres among corn, with a three shovel cultivator. Of the former, we have not noticed a single plant heaved out with the frost during the winter, though a part of it was sown on the poorest clay land on the farm, with but one plowing. It was sown immediately before that among the corn, and presented in the early winter a decidedly poor prospect. But that sown among corn is badly killed with winter, many plants lying on top the ground, dead. In some places, it seems almost entirely ruined. It is the same kind of wheat as that which was drilled. Our readers may draw their own conclusions.—*Indiana Farmer.*



KETCHUM'S ONE HORSE MOWING MACHINE.

Mowing machines were introduced, and used in various parts of New England last year, and with varied success. Some being highly pleased with the work which they were made to perform, while others were disappointed in the results, and a few abandoned them as being utterly incapable of confering any advantage to the farmer over the old mode of cutting with the scythe.

Our own belief has always been, that the machine would be so improved as to come into general use, and prove highly serviceable. This opinion has been greatly strengthened recently, by an examination of two or three different kinds of machines, and noticing obvious improvements over those of the same manufacturer presented last year.

The cut at the head of this article represents one of *Ketchum's* one horse mowers—it cuts a swath *three* feet wide, is much lighter than the two horse, and if it proves well, will become a popular, and a great labor-saving machine. Messrs. *Ruggles, Nourse, Mason & Co.*, Proprietors of the right for New England, say, in a circular they have just issued, that they are constructing the entire frame work and finger-bar of wrought iron instead of wood (as represented in the cut above) which adds much to the strength and permanence of the machine, while the weight is reduced about 200 lbs. Again, they say, "We *warrant* the two horse machine capable of cutting and spreading, with one span of horses and driver, from 10 to 15 acres per day of *any kind of grass, heavy or light, lodged or standing;* and do it as well as is done with a scythe by the best mowers."

Not having used the mower ourself, we prefer giving the testimony of others rather than express opinions of our own.

William S. Lincoln, Esq., of Worcester, and one of the best farmers in the Commonwealth, wrote last year as follows:

Worcester, Aug., 1854.

Messrs. Ruggles, Nourse, Mason & Co.:—Gents.,—Agreeable to your request I return to you the One Horse Mowing Machine left with me for trial, and in doing so cannot refrain from giving my voluntary testimony to its great value.

The machine was used by me to cut over about 30 acres of interval land. The grass was in many places heavy and lodged, the bottom fine, soft and very thick. In some few places it was a light crop of fine flexible dried grass, which yielded before the scythe. But whether in heavy thick bottom or badly lodged, or in the places of lighter yield, it cut alike well and close—closer indeed than I deemed desirable, or deem well for the land.

I apprehended difficulties in the operation of the machine from the peculiar character of the surface of the land. It is an irrigated meadow, not graded, intersected by ditches of different width and depth, running in different directions,

used for carrying on to its surface the waters of the "Blackstone." Yet notwithstanding these obstructions the mowing was done to my entire satisfaction.

I may mention perhaps that I used different horses at different periods of the trial, and am satisfied that a good horse of between 10 and 1100 is sufficiently heavy to operate it.

After all I have said, perhaps you will find the best *evidence* of my perfect satisfaction with the machine in the order for one which I now give you. At any rate, it is the best test I can offer of my entire satisfaction with its operation, and of my sincerity in the above.

Yours truly,

WILLIAM S. LINCOLN.

In relation to the two horse mower, Gen. SUTTON, of Salem, a farmer whom no one can visit without receiving material benefit, says:—

"I can only say that your mower operated to my entire satisfaction, and I have no hesitation in recommending its use to any farmer who has a large quantity of hay to cut.

I worked it altogether with oxen, upon ground of various surface, and found it to be eminently a labor-saving machine, economical and profitable.

I am with respect, truly yours,

WM. SUTTON."

Numerous other certificates are given from persons competent to judge of the merits of the mower. Those not much accustomed to machines, should not be discouraged if it does not come fully up to their expectations upon the first trial; a little *oil* and a little *patience* may bring every thing right at the second trial.

The manufacturers state that the mowers they are constructing this year are made from entirely new patterns, and that they are simplified and improved in many ways. They add to their circular the following schedule of sizes and prices:

We construct three sizes, as follows:—

	One horse Mower, 3 feet cut,.....Price,	$90 00
No. 1,	Two horse Mower, 4 feet cut.....	100 00
" 2,	Two horse Mower, 4 ft. 8 in. cut,.....	115 00
" 1,	Two horse Mower and Reaper combined..	120 00
" 2,	Two horse Mower and Reaper combined..	130 00

Extras to each Machine,—1 set of Cutters, 2 Cutters, 2 Fingers, and Wrench. Machines delivered at Boston or Worcester.

RUGGLES, NOURSE, MASON & Co.

For the New England Farmer.

TO GET POOR LAND INTO GRASS.

MR. EDITOR:—Will you allow me to make a few inquiries through your valuable paper? I have a piece of land, the soil a sandy loam and somewhat exhausted. I wish to reclaim it to grass as soon as possible, and not having much manure, I have thought of the following plan, viz:—plow the land in August, give it a thorough dressing with plaster, or plaster and ashes, sow to winter rye, with about ten or twelve pounds of clover to the acre. When the rye is taken off, plow it thoroughly, and the next spring manure with a compost of swamp muck and lime, at the rate of about one cask of lime to five loads of muck, and twenty-five loads to the acre; plant with an early kind of corn, and as soon as the corn can be harvested, plow again and sow down to grass. Any remarks on the above plan, especially as to the quantity of lime in the compost, the quantity of plaster to be applied to the acre, and as to the probability of getting a growth of clover, would be very gratefully received by a

Amherst, N. H., 1855. NEW BEGINNER.

REMARKS.—We think your experiment would be a judicious one. The quantity of lime you suggest is enough for one application, though many persons use a much larger amount. We would suggest that you cultivate the corn crop flat, instead of in hills, and at the third hoeing sow the grass seed and rake it in; then you have your field stocked down. The grass seed, being shaded by the corn, is much more likely to come up than when exposed to the full rays of the sun.

NUTRITIVE QUALITIES OF FOOD.

The excessive dearness of all kinds of food should induce not only habits of economy in its use, but should lead to the adoption of those articles of food for the table which are the most nutritious in their quality, and which, fortunately for the laboring classes, are the cheapest in price. Many persons go on in the old way, when food was plentiful and cheap, and use what costs them nearly four times the price of better and more wholesome articles of diet, considering the nutriment which they respectively supply. The comparative quantities of nutriment contained in the principal articles used as food have been tested by strict chemical analyses, and some very excellent books on the subject have been published, and ought to be studied in all communities where the laboring population predominate. It would teach them to discriminate between the various articles of food, and be the means of introducing more generally among them the use of articles of a much better quality, more wholesome, and far better adapted to supply the wastes of the substance of the body caused by daily toil.

The following results of such analyses, which we find in the *Baltimore Patriot*, derived from the best scientific sources, commend themselves to general attention for their value. It will be seen here what articles are the most nutritious. White beans, corn meal, wheat flour, barley meal, and rice are shown to be the very best kinds of food, and these are the very kinds which are the cheapest to purchase and use. Potatoes, which are enormous in price, lose more than three-fourths of their substance, and are the dearest kind of food which can be used.—*Philadelphia Ledger.*

"It is proper to state that the articles were all reduced to a perfectly dry state by evaporating the water they contained, and then subjecting them to careful chemical analysis. The following table, divided into three parts, animal food, vegetable food and fruit, shows the quantity of nutritive matter and of water in each article, and, by comparing one article with another, shows the comparative value of each as food. But as all the elements of nutrition are not of the same value, it

must not be inferred that an article that contains a large quantity of starch, for example, is more nutritious than one that contains a small quantity of animal fibrin and no starch.

Both starch and animal fibrin are elements of nutrition, but they are appropriated by the animal economy to very different purposes; the former to the formation of fat and animal heat, and the latter to the supply of all the tissues, bone, muscle, &c. The two elements are required in very different proportions, also, in forming food, and hence bread (though "men cannot live upon bread alone,") with its 15lbs. of vegeto-animal matter (gluten,) and its 50lbs. of starch of 35 lbs. of water, forms a composition of nutriment more nearly complete than any other substance. Starch is required in a much larger proportion than gluten in vegetable nutriment, and it is furnished abundantly in all kinds of grain, beans and potatoes. If potatoes contained a small proportion of gluten, say 5 lbs. to the 100 lbs., then their nutritive property would compare with that of wheat flour in the proportion of 22½ to 90. That is, potatoes would be worth just one quarter as much by weight as wheat flour. But as they contain no gluten nor caseine, and very little albumen, consequently little if any of the elements of proteine, a larger quantity of animal food of some kind is required to be combined with them than with bread, in the formation of food.

ANIMAL FOOD.

100 pounds	fresh Beef con.,	26 lbs.	nut. mat.,	74 lbs.	water.
"	" Veal,	25 "	"	75	"
"	" Mutton,	29 "	"	71	"
"	" Pork,	24 "	"	76	"
"	" Fowls,	26 to 30	"	70 to 74	"
"	" Fish,	18 to 20	"	80 to 82	"
"	" Milk,	7½ "	"	92½	"
"	" white of Egg,	14 "	"	86	"

VEGETABLE SUBSTANCES.

100 pounds	Wheat Flour c.	90 lbs.	nut. mat.,	10 lbs.	water.
"	Corn Meal,	91 "	"	9	"
"	Rice,	86 "	"	14	"
"	Barley Meal,	88 "	"	12	"
"	Rye Flour,	79 "	"	21	"
"	Oat Meal,	74 "	"	26	"
"	Potatoes,	22½ "	"	77½	"
"	White Beans,	95 "	"	5	"
"	Carrots,	10 "	"	90	"
"	Turnips,	4½ "	"	95½	"
"	Cabbage,	7½ "	"	92½	"
"	Beets,	15 "	"	85	"

FRUITS.

100 pounds	Strawberries c.	10 lbs.	nut. mat.,	90 lbs.	water.
"	Pears,	16 "	"	84	"
"	Apples,	17 "	"	83	"
"	Cherries,	25 "	"	75	"
"	Plums,	29 "	"	71	"
"	Apricots,	26 "	"	74	"
"	Peaches,	20 "	"	80	"
"	Grapes,	27 "	"	73	"
"	Melons,	3 "	"	97	"
"	Cucumbers,	2½ "	"	97½	"

N. B. It must be borne in mind that the animal substances were all clear of bone and fresh, the vegetable fresh and deprived of skins, &c., and the fruits fresh and perfect. It will be perceived that *mutton* is the most *nutritious*, as it is acknowledged on all hands to be the most wholesome of all animal food; that while beans are the most nutritious of all vegetable food, and plums are the most nutritious of all fruits; that fish is the least nutritious of solid animal food; turnips the least so of all vegetables, and cucumbers the least nutritious of all fruits.

For the New England Farmer.

LETTER FROM MR. FRENCH.

Washington City in Spring-time—A Glimpse of the Commissioner of Public Buildings at Home—City Improvements—Capitol—Patent Office—A Virginian's Opinion of the Yankees—Deep Plowing—Mr. Claggett's Farm—Seventeen Year Locusts—Fruit Prospects.

City of Washington, D. C., May 12th, 1855.

DEAR READER:—Washington is a lovely city in the spring-time, especially when not beclouded by the session of Congress. Having given in the *Farmer* some not very attractive pictures of the market, and the agricultural specimens in the streets, I feel now, when the leaves are already developed in full beauty, and the roses are beginning to unfold their buds, and the newly-mown lawns of the Capitol grounds are looking soft and green, like carpets of velvet—I feel now, when at the North a cold storm of mingled rain and snow has just passed by, as if I owed an apology to this more Southern climate, for any expressions of disrespect I may have been "left" to drop in relation to it. Forgetting then the donkeys and darkeys, the scorching heat of last July, with the thermometer at 90 day and night, for most of the month, the crisped leaves and seared grass of that season of drought, let us take a more agreeable view than either summer or winter can afford us, of Washington in the spring. Looking out at this moment, from the library of a friend on Capitol Hill, into his garden at the rear of the house, I behold an arbor constructed with his own hand, completely covered with roses and honeysuckles and the Washington bower, intertwining their long pliant branches, and throwing out at the top a thousand waving shoots tipped with the bursting buds. Close by is a fountain, throwing high into the air a jet of pure water, sparkling in the light of the setting sun, and falling with a cool and pattering sound into the pool about it, while the children, playing upon the brink, now are watching the gold-fish and now pursuing the humming-birds; and my friend and brother, sitting on a rustic seat near by, with book in hand, finds little time for reading, but much for the enjoyment of the work of his own hands, and of *hers*, the divinity whose taste has directed the planting of the flowers, the training of the vines, and the wanderings of the walks among them. This is a rational happiness, the enjoyment of nature herself, which one may find if he have the taste for it, without unreasonable cost, in the immediate neighborhood of the Capitol itself.

The growth of trees, vines and shrubbery, is much more rapid here than in New England, so that one may create with nature's ready aid, a wilderness of foliage and flowers under this warmer sun, while at the North, his trees planted at the same time would have scarcely recovered from the shock of transplanting.

Washington now numbers about fifty thousand inhabitants. Its "magnificent distances" are fast filling up with dwellings and public buildings. The new wings of the Capitol, and the new dome to be added, will make it the most magnificent edifice upon the continent. The Patent office, built of white marble upon a basement of granite, is a structure of which any nation might be proud. The broad grounds of the Smithsonian Institution, laid out and planted under the direction of the lamented Downing, and Lafayette Square in front of the President's mansion, the work of the same master, are constantly proclaiming the triumphs of his art and genius. "The circle" of about one and a half acres, near Georgetown, and the triangular spaces laid out by George Washington himself, in his original plan of the city, are now undergoing improvement and will be soon rescued from "the reign of the bare and the bald," and made green and beautiful. More than five thousand trees have been planted the last and present seasons upon the public streets, under the direction of the Commissioner of Public Buildings and Grounds, who is no other than the friend and brother before mentioned. Verily, there are pleasant views that we may take of this goodly city, and no one can fail to be impressed with the foresight and wisdom and faith of the Father of his Country, as the beauty and symmetry in the plan of the town generally unfolds itself to meet the increasing wants of the government and the citizens.

But, it is not in the city alone, that improvement is going on. Upon all the principal thoroughfares into the country, the value of land for its products is beginning to be appreciated. A thorough and intelligent cultivation is finding a profit where shallow plowing and shallow plowmen could not find a subsistence. I have before given you a sketch of one of these improved farms, owned by Mr. Morrison, a native of New Hampshire. The Yankees are doing wonders both in this region and many parts of Virginia, upon what were considered worn out lands. A Virginia gentlemen whom I met recently in a railroad car, informed me that in his own neighborhood, Northern men were setting a valuable example, and that he himself had adopted the new idea of deep plowing, and was getting eight barrels or forty bushels of corn, where he formerly got but three or four barrels. He said a few years ago a negro and a man were the only force used to plow for corn, the plow being run from two to three inches deep. He had been travelling in New England, and spoke highly in praise of the energy and industry of the people, which he thought on Virginia soil would make them independent. He said he thought one free laborer at the North performed about three times as much work as a slave!

Good husbandry and energetic farming, are, however, not limited to New England men. I yesterday accepted an invitation from a leading merchant of this city, Mr. Darius Claggett, to visit his farm on the Rockville plank road, about five miles from Washington. His family reside on the farm in summer, and Mr. Claggett himself comes to his city business every day except Sunday and Friday.

I have rarely seen a place which gave so decided evidence of good taste and good judgment, and withal, of such persevering faith in our good mother earth, as this. Six years ago Mr. Claggett purchased three hundred acres of land, mostly covered with a small growth of yellow pine entirely unimproved. In this short period of time he has cleared and put under the plow one hundred and fifty acres, a large part of which is covered with a choice variety of fruit trees of all descriptions that the climate will produce. His trees appear to be judiciously selected, carefully pruned and protected, and making a growth far beyond what I have ever seen at the North. He has already 2500 apple trees, 450 pears, 1600 peaches, 150 apricots and as many plums.

The apple trees are set forty feet apart, and the land among them planted with wheat in drills, with bare strips of a few feet in width along the rows. They are making generally a better growth than we get in New Hampshire. I saw upon them marks of our old enemy, the borer, and far worse marks of the seventeen-year-locusts of 1852. According to the theory, they will not be here again until 1869, by which time our friend will, it is hoped, have been paid by the fruit of his trees for all his labors. He said that when the locusts had possession of his trees, he could scrape from the body of a newly-set apple tree a pint of the insects at once! His pear trees, however, far excel his apples. Indeed, I have never seen so large a number of pears together, that appeared so healthy and as we say at home, so *thrifty* as these. I saw no sign of the sap-blight or winter-killing, but the trees seemed full of life, and many of them were full of fruit already set. The peach orchard is already set for a large crop. In 1853, Mr. C. sent to the market 700 baskets of peaches, and his crop this year will probably far exceed that quantity. He has this year in grass, about 20 acres, in wheat about the same, in corn about 40 acres, and in potatoes, about 12 acres besides large tracts of vegetables and small fruits, among the rest two acres of strawberries. He manures all his crops with Peruvian guano, 300 pounds to the acre, plowed in, and thinks this will insure him abundant crops.

Mr. Claggett has been for thirty years in his counting-room, and never owned a farm before. Indeed he informed me that he never saw a plow run in his life until he saw his own, on this farm. His labor is performed by a foreman, a native of the district, and six laborers, mostly Irish, with two yoke of oxen and three horses, a force by the way, entirely insufficient to perform such mighty works on New England soil. I did not see the foreman, but cannot help suspecting that he is a farmer of the right stamp. I have good faith in the success of any intelligent man who will read and inquire, and spend his money freely that he may produce satisfactory results in agriculture. Still it is a business not learned in a day, and I have no reason to doubt the correctness of our friend's remark, that "Farmer Claggett owes merchant Claggett a good deal of money."

Such men, however, are public benefactors. They inspire others with faith in labor, and faith in the heritage which a good God has given us, and if they expend money in the experiments, they derive from them the rational satisfaction that they leave the earth better than they found it.

H. F. FRENCH.

For the New England Farmer.

SMALL POTATOES.

MR. EDITOR:—We cannot be surprised at the different theories and conclusions among men, in matters of religion, law, politics, &c., for reasons that selfish aims and party ends are sometimes objects to be carried without reference to virtue or beneficial objects for public good. But in matters of the mechanic arts and of farming there is *but one right way*, to be profitably pursued, however much *practice* may vary. I respectfully beg to differ widely from your correspondent, S. P., and also your own "remarks" in encouraging the planting of "small potatoes." *Experience* has been my schoolmaster. "S. P." does not say, when the "large potatoes" were planted, that gave his father "100 bushels not large enough for the table," whether the season was one of much *wet* or extreme *drought*. *Nature* must have been exceedingly harmonious on the one hand, or over abundant on the other, to have given 100 bushels all *small potatoes*. I should attribute to other causes rather than "large" seed, and then the singular metamorphoses of the large potatoes turning into small ones, and the small ones to become large again, shows the original large seed retained its vitality, which had been acted upon by wet or drought the first season.

Now the farmer who planted "large potatoes" without cutting (at the time the "robin's egg" size were planted,) over-seeded to excess. While 5 stocks to a hill is a full compliment, some 20 to 30 sprouts came from a large potatoe. What but small vines and smaller potatoes could be expected from such a crowded hill? Why is a large potato "an artificial growth" any more than a small in the same hill with the same advantages to grow? So S. P. says "the native growth of the tuber is small." This we admit if he refers to the ball seed, which requires 3 or 4 years to mature. The farmer wants the potatoe fully developed to practice upon. He wants neither seed from the ball or small potatoes. It would seem to be a more safe doctrine to plant the largest, best developed seed. In planting small potatoes these pertinent questions arise. Do you winnow out your small wheat, barley, rye, oats for seed? Do you sow inferior grass seed and clover? Do you save your small melons, cucumbers, squashes and pumpkins, for seed? Do you trace up your small ears of corn or take the tips for seed? Do you set out small beets, carrots and the like, to gather seeds from? Do you go into the nursery and select small, unpromising trees for your orchard? Do you save your smallest calves, pigs, lambs or fowls, to propagate from? I need not multiply the chances which would seem to be a violation of the common rules of progress. Every good farmer aims to go ahead.

Again permit me to refer to the Long Island farmers, who plant their largest potatoes and cut off the seed end, to avoid small ones. In digging time no one would endorse the "depreciation theory" of planting "small potatoes" if they could witness the large mercers thrown out with scarcely any small ones.

As before stated, I hope fair tests will be tried. Several years experience satisfied me, when sorting for the bins, half being small, that "small potatoes" returned small potatoes. Hence I am at issue, even if alone, with all small potatoe advocates. Respectfully, H. POOR.

Brooklyn, L. I., May 19.

For the New England Farmer.

LABELLING FRUIT TREES.

Fruit trees should be distinctly labelled at the time they are planted out, and when intended for an orchard, or where there are several together, a plan should be made of them, with the name of the variety of each tree plainly written against it; then, in case a label is lost by accident, or otherwise, by referring to the plan the variety is at once ascertained. Much confusion and perplexity results from a neglect of this subject; fruit of the first quality is often exhibited from grafted or budded trees, the name of which is unknown to the owner, although the variety may be quite common in many localities.

Nurserymen should be exceedingly careful to correctly label their trees, as it is a disappointment, as well as loss, to wait patiently several years for a tree to bear, and then to have it produce a different kind from what it was purchased for; and should scions be taken from it for propagation previous to bearing, the evil might be much extended.

Scions should be taken from trees which we are absolutely certain produce the kinds their name indicates; the labels put on and kept on, so long as any of the bundle remain. When scions are obtained from others it should be from men in whom we can place the most implicit confidence, and then mistakes will sometimes occur when we have used the utmost vigilance; but to make as few as possible should be the constant aim of all propagators of fruit.

O. V. HILLS.

Leominster, May, 1855.

For the New England Farmer.

MR. EDITOR:—My husband has for several years been a subscriber to the *New England Farmer*, and I am a constant reader of its pages. I have taken the liberty to send you a copy of my scribbling on "Spring." It is a homely production, I am well aware; but if you think it is not too late in the season, and is any way worth a place in the corner of your paper, I shall be glad to see it published.

Yours respectfully, MYRA MYRTLE.

SPRING.

The poets they sing of the beauty of Spring,
But they don't sing you half of the story;
The poets they tell of the flowers in the dell,
But they don't tell you half of Spring's glory.

Why! each old granny goose and the hens on the roost
Know full well when the Spring time is coming;
So each builds her a nest, and then lays like "possessed,"
Sits, and soon with her young is seen running.

There's the litters of pigs, dancing gallopade jigs
To music of their own creating;
There's the old turkey gob, strutting round like a "snob,"
On his flocks of young long-legs is waiting.

Then the calves in the stable, fat and plump for the table,
Are a part of the beauties of Spring;
And the flocks of young lambs, frisking after their dams,
Ah! their bleatings make music again.

The wild geese flying o'er to some far northern shore,
Crying on, on, as onward they fly;
The old mother hen's clucks and the quacking of ducks
Is music to both you and I.

Yes, the poets they sing of the beauties of Spring,
But they don't sing you half of the story;
The poets they tell of the flowers in the dell,
But they don't tell you half of Spring's glory.

Somerset, Mass.

For the New England Farmer.

THINGS IN WISCONSIN.

MR. EDITOR:—A communication from my pen appeared in the columns of a late number of your paper, the result of which is that the last two mails have brought me about *fifty* letters of inquiry, all requesting information of a character so similar, that, with your permission, I will give a general reply through the medium of your paper. I design to be as brief as possible in replying to the questions proposed, and my communication must necessarily appear somewhat incoherent, except to those particularly interested.

Land for sale here is government land, and can be purchased at a distance of from 2 to 10 miles from the river at $1.00 an acre. No credit is given on land, and *gold* only taken in payment. The most that one purchaser can take up at that price is 320 acres, and he must then make oath that he wants it for actual occupation. Persons who have not cash to pay down, can pre-empt 160 acres, or less, and by commencing improvements upon it within 30 days, can secure it for one year. If not paid for at the end of the year, it is subject to entry by any other person. Oak openings are tracts of land sparsely covered with timber, and free from under brush. Prairie and timber land, in juxtaposition, can be found in large quantities. There is plenty of wood for fuel and fences. No coal has yet been discovered in this vicinity. The soil is a dark loam, perfectly free from stones, easy of cultivation, and adapted to wheat, corn, rye, oats, barley, potatoes, &c. Fruit, of all kinds, will grow here as well as in any part of New England, if we except the peach, which has not yet, to my knowledge, been tried.

All the surplus produce raised by the farmer can be sold at his door, and is consumed by immigrants and laborers in the pineries. There are no houses ready for the reception of immigrants. Two men, in two or three days, will throw up a log cabin, or a board shanty, that will be tolerably comfortable, and such are in general use in all new countries. Lumber can be obtained at $22 a $25 in the yard, and for $14 a $16 at the pineries on the Black and Chippewa rivers. The country is generally healthy. Most of the diseases are connected, more or less, with biliary derangement—some cases of fever and ague, but healthy immigrants are seldom troubled with it. There is no wet, marshy land in this vicinity, or in this part of the State. We have no parks or commons laid out in our town. He who piled up the hills and scooped out the valleys of this locality, has forever rendered all such places unnecessary. The current of the river, at this place, is about four knots an hour.

Without particularizing the prices of provisions, it may be safely calculated that the price of living here is 50 per cent cheaper than in New England. Stoves can be purchased here at about eastern prices, adding cost of transportation.

Oxen, measuring 6½ feet, are worth from $110 to $125; cows, $25 to $40; horses, $100 to $200. Carpenters and masons, good workmen, get $1.75 to $2.00. Persons coming from New England should purchase tickets through to Galena. There are several routes at about the same expense, and persons can make their own selection. From Galena, by steam to our landing. It is on the direct route to Minnesota, and persons wishing to visit that country, can do so by taking Winneshick on the route. Fare from Boston to this place about $33.

Hoping the information herein communicated satisfactory to all inquiries, I close.

Yours truly, JAMES OSGOOD.

Winneshick, Bad Ax Co., Wis., April 18, 1855.

For the New England Farmer.

CALVES MARKED BY FIRST SIRE.

MR. EDITOR:—On looking over the well-arranged pages of the Agriculture of Massachusetts, page 273, it is said, to be "an established fact, that calves possess the distinctive traits of character which prevailed in the animal that first impregnated the heifer that bore them." By which, I understand that all the offspring of the same mother will be more or less marked with the peculiarities of the sire of the first calf. Assertions of this kind I have more than once seen, but never before in a form so authoritative. Can this be a law of generation, among animals? If true in animals, why not true in other classes of beings? The principle is too important to be assumed without ample proof. It was long ago said that "one swallow does not make a summer." I confess, that I was a little started at the assertion, without any note explanatory. I think the cautious editor of the volume would

never himself have penned such a sentence. If true, I should like to see a more distinct development of the facts that tend to establish this theory.

I was more ready to notice this exception, because I recognize in many of the papers corrections made that are decided improvements. This volume I think a decided advance upon those before published; and if I do not mistake, there is still room for further improvements. x.

May 14, 1855.

MULCHING.

This process, although known and practiced for many years by a few cultivators, has become extensively adopted only at a very late period. It seems peculiarly adapted to our hot and dry summers, and operates chiefly in preserving the moisture of the surface, and in preventing the growth of weeds. The moisture at the surface of the earth from rains and dews, is quickly dissipated under a hot sun; and if this surface is allowed to become covered with a dense growth of living grass and weeds, there pump out of the soil and and throw off into the air a much larger quantity of moisture than is evaporated by a bare surface of earth only. But if this surface is covered with a few inches of old straw, hay or leaves, the moisture is retained in the soil, and the growth of weeds prevented. As a general rule, we have found it most advantageous to leave the surface bare and keep the soil well mellowed till near mid-summer, and then to apply the mulching. For a covering of litter, while it promotes the humidity, also prevents the heating of the soil, in and in this way may retard early growth if applied to soon. There are exceptions, however; one in the case of large, deeply-rooted trees not affected by nor needing mulching, and the other which are removed in summer, need the careful and constant retention of the earth. We have succeeded, with scarcely one failure in fifty, in transplanting the strawberry drought and heat of summer, by simply giving the surface a mulching of two inches of barn manure, and on which the watering was poured when necessary. Indeed, there is nothing that better prevents the ill effects of baking by surface watering, than a covering of this sort of a moderate depth. Mulching will, however, promote moisture in the soil, even when neither artificial nor natural watering is given, simply by arresting such as rises upwards through the earth. In one instance a striking illustration of this effect was furnished during a very long season of drought, which injured and threatened to destroy a row of newly transplanted apple trees. Their leaves had already begun to turn yellow, and growth had ceased, but on coating ground about them with a crop of mown weeds, a change was soon effected, and in three weeks the leaves had returned to their deep green hue, and in some instances growth had recommenced. But on no kind of tree is mulching more necessary than on newly transplanted cherry trees. Thousands of these are lost every season, after they have commenced growing, by the drying heat of mid-summer, and the evil is sometimes increased by superficial watering. A deep mulching will generally prove a complete remedy if seasonably applied.

Some interesting facts on this subject were stated, and valuable suggestions made at one of the conversational meetings of the Massachusetts Horticultural Society. S. Walker remarked that he had used tan, sawdust, litter, leaves, &c., but he believed short, newly mown grass one of the best things,—he had mulched a great deal with it, and found it laid close to the soil. He also recommended the succulent weeds of the garden or roadside. He found tan and sawdust to be useful merely by retaining the moisture. D. Haggerston had found sedge from salts marshes best, particularly if cut short; a good watering upon it made it lay close to the ground. He found it excellent for strawberries. He had also found tree leaves excellent, if they had partly decayed, so as not likely to be blown away. Old hot bed materials made of leaves and manure had proved particularly fine. Several spoke of the ill effects of too deep a mulching, but we think the more common error is in spreading the covering of the soil too thinly.

Mulching is a very easy and cheap practice, and the season is now at hand when our readers may prove by varying experiments the best mode of performance.—*Country Gentleman.*

EXTRACTS AND REPLIES.

BLACK LEG IN CATTLE.

MR. EDITOR:—I wish to make the following inquiry through the columns of your valuable journal:—"Is there any known remedy for the cure of black leg amongst cattle?"

Within the past few years I have lost more cattle with this disease than by all others combined. Gladly would I know and seek to obtain that preventive, if any there is, which shall arrest the progress and restore to health the creature that may be attacked with this worst, it seems to me, of all diseases a creature may die with. It has been said that bleeding as soon as they were attacked with it, would surely prove a cure; of this I have not much faith, as one of my neighbors had one attacked which he bled as soon as he discovered him ailing, and to all appearances it did him no good at all.

It seems "rather hard" to lose cattle, and generally the best ones in the lot, with this disease, and not be able to afford relief to them in any way. I hope to hear from some of your correspondents in regard to this subject.

JOSEPH BLAKE.

Ashfield, Mass., April, 1855.

TO KILL TICKS ON SHEEP.

MR. EDITOR:—In looking over the last number of your paper, I noticed an inquiry by a subscriber from Deerfield, N. H., "How to kill ticks on sheep and lambs without injuring them?" In answer, I would say kill the ticks on the sheep; and there will not be any on the lambs; this may be done by feeding to his sheep sulphur mixed with salt in the month of March, given to them two or three times; the quantity should be about three pounds to one hundred sheep. I presume that any other time in the season will answer equally as well, although I have never tried it except in March, while the sheep were about the barn.

Ludlow, Vt. R. C. HAVEN.

WHITE THIMBLEBERRY.

Mr. Editor:—I saw an inquiry in your paper of the 15th ult. in relation to the white thimbleberry. They have been in several of the gardens of this town for the past ten or fifteen years. I have some that fruited finely last season, but I find that they will fruit better to be protected in winter, and partially shaded in summer. They may be bent down to the ground and covered like the raspberry. The wood is of a pea green color, and exposure to the sun turns it to a dark brown. The growth is very luxuriant; some of mine grew last year twelve feet.

West Danvers, 1855. J. S. Needham.

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TO PREVENT FOWLS FROM SCRATCHING.

Among the latest inventions of the age is one for the prevention of that pestiferous *scratching* of fowls. Loop a strip of thin leather on the legs about five inches long, and you have accomplished the object. Try it, and be sure and not laugh the first time you see them waddle. It is a perfect preventive. John Patient.

Vt., May 23.

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DIX PEAR.

I have grafted the Dix pear on a medium-sized tree which bore the fourth year, and has borne well annually since.

I should like to inquire which is the best for milch cows; to give them salt at stated times, or to keep it by them. If at stated times, how much, and how often. A Subscriber.

Remarks.—Cattle will not take more salt than is useful to them, so that if it is where they can have constant access to it without waste, it is as well as any way. If at stated times, twice a week is often enough—as much as they will take.

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UNFRUITFUL APPLE TREES.

Mr. Editor:—I have a fine lot of apple trees, have taken much pains with them, scraped, dug and manured them, but they do not bear—many of them—as I could wish, and indeed, I think so much as they would, were there not some drawback, not well perceived and understood. I find the well-scraped trunks and limbs covered with innumerable little gnat-like or rather louse-like little things, whether animal or vegetable, I cannot certainly say, but apparently the former. Now what I wish, and for what I write, is an explanation and an antidote from you or your correspondents. Please answer, and oblige

Northfield, N. H., 1855. A Subscriber.

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TO PREVENT GRAPE VINES FROM BLEEDING.

J. H. Monroe, Esq., of Boston, informs us that common hard soap applied to the end of a recently pruned grape vine, will effectually stop the bleeding. Mr. Nourse, the proprietor of the *Farmer*, has recently made trials of this remedy, and fully confirms the statement of Mr. Monroe, and thinks sawing better than cutting, as it leaves a rougher surface, to which the soap will adhere more readily than to a smooth one. In case of accident, this remedy may enable us to save a valuable plant.

THE WIRE WORM.

As this little insect is often very troublesome to many farmers, injuring their potato crop, I thought I might be doing a favor by stating how they can prevent their perforating their potatoes. The remedy is simply this:—when planting the potatoes, drop a piece or the whole of a cob in each hill, and the worms will gather around the cob and penetrate it instead of the potato.

North Berwick, May, 1855. M. Y.

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THE ONION GRUB.

A correspondent of the *Gardener's Chronicle* states that he has applied nitrate of soda to the plants with good effect in preventing the ravages of this grub. He used half a pound of the salt to a gallon of water, and applied eight gallons to a bed of ten yards in length. He states that it checked the progress of the worms, and the crop turned out well

CURE FOR WARTS.

J. M. Jessup, in the *Country Gentleman*, states that paring warts down with a sharp knife or razor until they bleed a very little, and then rubbing them with fine salt, will obliterate them; and thinks the same process will have the same effect on cattle.

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TO DSETROY TICKS.

A Subscriber, at Nantucket, says that one pound of tobacco, steeped in six quarts of water, and applied to sheep and lambs, will destroy ticks.

VALUE OF STATISTICS.

We published last week some strictures on the returns of the last census:—four or five cattle and the same number of horse dealers in Kentucky. Our attention was called, by a Rev. gentleman, several months since, to the return of apprentices in Massachusetts, which was as wild as that spoken of in Kentucky. But it is not so much in reference to the inaccuracy of the returns to which we wish to ask attention, as to the caution required in drawing conclusions from such returns, even if they were strictly accurate. For example, certain employments are deemed very healthy, others very unhealthy, and this conclusion is drawn from the average age of those engaged in those employments, or from the average age at which persons thus employed die. Now this at first view seems a just comparison, but a little thought will show that it is extremely fallacious. Professional men, as ministers, lawyers, and doctors, enter comparatively late into their business, and once entered remain through life. If they engage in some other employment, they still retain their profession, or so much of it that they are counted in the number. There are exceptions, but they are comparatively few. Hence the average is high.

Again, on the other hand, shoemaking, printing, making clothes, and all the varied mechanical operations, are called hazardous because a large proportion of those who die are young; but it should be remembered that a large proportion of those thus engaged are young. Comparatively

very few learn a trade after they are 20 or 21 years old, and in this country very few continue to work at their trade after middle age. Look at the young shoemaker. From 21 to 30 he sticks to the last and the awl, making an occasional call among the farmer's daughters, and perchance getting a life lease of one of them. The heaven born desire of a home which he can call his own is gratified. A little land, a cow, a pig, a garden, claim his attention. Still the shop is not deserted. Soon a larger piece of land, lying very near him, is for sale. It is added to his little homestead. He has now some plowing, haying and harvesting to do, and when Mr. A. is in a great haste for his boots, the weeds in his corn have a holiday. Soon a little more land is bought, a journeyman takes the shop, and at 40 the census taker finds him in the field gathering his crops, and writes him *farmer*. If our young shoemaker had lived in a village instead of on a farm, there would have been a *front shop*, which would by degrees receive articles from the market as well as from the *back shop*, and our shoemaker would become a shoe-dealer—a shoe-merchant —*a merchant*. Thus, with slight variations, we might trace the history of thousands, who commenced business as mechanics or artizans, laboring with their hands, and at middle age become farmers, manufacturers, merchants, &c. But, on the other hand, who has known the farmer at 45 become a shoemaker? A merchant at 40 become an artizan? Who has known a minister at 50, leave his desk and enter the work-shop of any mechanic? No, it is not the way Providence has shaped our destinies.

The farmer is the long-lived man; therefore every man desires to be a farmer, and to this end shapes his plans and regulates his conduct. To own a piece of land and cultivate that land, to see the fruit grow and mature under his direction, is a wish almost co-extensive with the race, where man is free and the end within the limits of human exertion. We would not say that all employments are alike conducive to long life. We do not believe they are. But we do say that the scale based on the average age of those living or dying in any employment, is a most fallacious one, and leads us to most erroneous conclusions. —*Culturist & Gazette.*

PLOWING WITH AN ELEPHANT.

P. T. Barnum informs the *American Agriculturist* that he has been *plowing with an elephant* for about a week. He says:

He takes the subsoil plow and drives it down 16 to 21 inches, in a tight, hard sward, and moves so fast and easily, that it is hard to realize that he has *anything* attached to him. He walks nearly twice as fast as a horse, and plows as correctly as the best broken team in the world. His attendant sometimes rides him, and sometimes walks (fast) by his side, while another man holds the plow. He also draws carts, stone-boats, (drags) *loads wood*, piles timber, picks up stones, and makes himself *generally useful* about the farm.

As for the *profit* of farming with elephants, I have not taken that part into consideration, and probably shall not, though at a "rough guess," I should think, all things considered, horses, oxen, or mules, would be quite as economical on a farm as elephants. But of this, I will leave the public to judge for itself, when I inform them that he eats three pecks of oats per day, and about 200 lbs. of hay. The one I use is as docile as a cow, yet this is not always the case.

Three pecks of oats and 200 lbs. of hay per day, would be sufficient for six horses. Will Mr. Barnum be kind enough to give us the live weight of the elephant, and the *exact* amount of food consumed on an average?

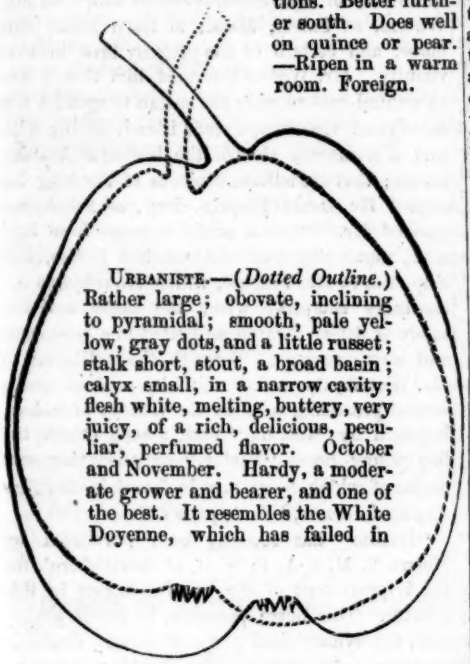
HISTORY OF MEDFORD.

We have examined some of the proof sheets of the "History of Medford," by the Rev. Charles Brooks, now in press, and find that the volume is likely to prove to be both instructive and entertaining. The author seems to have been most thorough in his researches and his work will be one of great value and interest. We intend from time to time to make a few short extracts from the volume. The following account of the "Baldwin Apple" will be perused with interest.—*Transcript.*

To Medford belongs the introduction of the celebrated "Baldwin Apple." The first tree, producing this delicious fruit, grew on the side hill, within two rods of the former Woburn line, and about ten rods east of the present road which leads from West Medford to the ancient boundary of Woburn. It was on the farm occupied by Mr. Thompson, forty or fifty rods south of what used to be called the "black horse tavern." At the request of Governor Brooks, the writer made a visit to that tree in 1813 and climbed it. It was very old and partly decayed but bore fruit abundantly. Around its trunk the woodpeckers had drilled as many as five or six circles of holes, not larger than a pea; and, from this most visible peculiarity, the apples were called "Woodpecker Apples." By degrees their name was shortened to *Peckers;* and, during my youth, they were seldom called by any other name. How they came by their present appellative is this: Young Baldwin, of Woburn, afterwards a colonel, and father of Loami, was an intimate friend of young Thompson (afterwards Count Rumford;) and, as lovers of science, they asked permission of Professor Winthrop to attend his course of lectures in natural philosophy, at Harvard College. Twice each week, these two thirsty and ambitious students walked from their homes in Woburn to bring back with them from Cambridge the teachings of the learned professor. One day, as they were passing by the "Woodpecker Tree," they stopped to contemplate the tempting red cheeks on those loaded boughs, and the result of such contemplations was the usual one—they took and tasted. Sudden and great surprise was the consequence. They instantly exclaimed to each other that it was the finest apple they ever tasted. Some years after this, Col. Baldwin took several scions to a public nursery, and from this circumstance they named the apple after him, which name it has since retained. In the gale of September, 1815, this parent tree fell; but very few parents have left behind so many flourishing and beloved children.

NAPOLEON AND URBANISTE PEAR.

NAPOLEON. — Rather large; obtuse-pyriform; greenish pale-yellow, deeper in the sun, sometimes a red tinge; stem rather short, rather stout, in a slight depression; basin of moderate depth; flesh whitish, coarse, melting, extremely juicy, of a sprightly, slight acid, delicious flavor. October and November. Sometimes excellent, but rather late and uncertain in this region, excepting in warm soil and locations. Better further south. Does well on quince or pear. —Ripen in a warm room. Foreign.



URBANISTE.—(*Dotted Outline.*) Rather large; obovate, inclining to pyramidal; smooth, pale yellow, gray dots, and a little russet; stalk short, stout, a broad basin; calyx small, in a narrow cavity; flesh white, melting, buttery, very juicy, of a rich, delicious, peculiar, perfumed flavor. October and November. Hardy, a moderate grower and bearer, and one of the best. It resembles the White Doyenne, which has failed in some sections. Cabot, after long experience, recommends this as one of the surest and best for general culture. Long in coming into bearing on the pear stock. Flourishes double worked on the quince. Foreign.—*Cole's Fruit Book.*

COCKROACH RIDDANCE.

The *Scientific American* says—"*Common red wafers, scattered about the haunts of cockroaches, will often drive away if not destroy them.*"

These wafers, like candies, are colored red by oxide of lead; a most deadly poison, and so is the acetate of lead, or sugar of lead, as it is sometimes called, on visiting cards, which being a little sweetish, has been known to destroy young children to whom they were handed, to be amused with. Fashion for once acts sensibly in discarding glazed cards, using instead *Bristol board*, more pliant, less cumbersome, and really more delicate. And while we are speaking of one of the pests of housekeepers it may be well to know

HOW TO GET RID OF RATS, old, young, and middle aged, with the shortest possible suffering to them, and with small probability of their dying in their holes or other uncomeatable places.

Spread a level teaspoon of flour or cornmeal on a chip or small piece of dirty board, sprinkle over this half a grain of strychnine; it kills the rat before he can get to his nest.

It would be wrong to let this statement pass, in a journal like this, without cautioning the reader that strychnine is a fine white powder, much like flour, made from the seeds of a fruit which looks like an orange, growing on a moderate-sized tree in the East Indies, in the island of Ceylon and neighboring islands. A sixth of a grain of pure strychnine will kill a dog in half a minute. One grain, which would easily lie on a three cent piece, or even less, may prove fatal to a man. Hence the reason for not mixing more than half a grain at a time, and by putting it on a chip or dirty board, it would not be likely that children would taste it. although the mixture with flour looks very much like white pulverized loaf sugar. As it is such a deadly and instantaneous poison no more than half a grain should be purchased at a time; it should not be allowed to pass out of the hands of the head of the family for a single moment. The mixture should be placed in a room the last thing at night, the door locked, the key put in the pocket, and removed the first thing in the morning, by throwing chips and all into the fire, washing the hands well after doing so, as also after first mixing it, for a great deal less than a grain would kill a man, if it happened to fall on a sore or cut finger.—*Hall's Journal of Health.*

DEEP TILLAGE.

In the last volume of the Essex County Agricultural Transactions, there is a capital article on this subject, by Dr. E. G. KELLEY, of Newburyport, which we read with a good deal of interest last fall, and intended long before this time to have placed portions of it before the reader. The portion which we now give below, no doubt will prompt many farmers to plow a little deeper than they ever have before:

It turns the drought itself to good account, and renders mulching and irrigation comparatively useless, or, if used, more efficacious. During a dry spell and in trenched ground roots strike deeper in search of food and moisture, become more extensively ramified, and sooner find the rich loam and manure intermingled deeply with the soil. The leaching process, as it is called, is reversed, and takes place upwards more than at any other time, or, in more scientific phrase, capillary attraction is increased. As each particle of moisture is evaporated from the surface, it is succeeded by another, and the whole soil is filled with the ascended moisture and gases, which are appropriated by the numerous rootlets as they have need.

The wet season is also a blessing to the deep cultivator. The more rain, the more heat, ammonia, carbonic acid, and other organic elements are left in the soil as it descends. As each drop filters through, it is succeeded by another, or by air, both essential to vegetation; and to dissolve, act on, or combine with, the inorganic elements of the soil. As the water drains off, air is sure to follow, and this is the proper mode of its circulation. Each is also generally at a higher temperature than the undrained land, and the

warmth of the under soil is therefore relatively increased. The farmer often objects to this waste of water, and would retain it for a dry time! The trenched and porous soil holds water like a sponge, notwithstanding the drainage. It retains or can command enough for the wants of vegetation. But let us see the operation on the undrained land.

The farmer often speaks of his "cold wet land." No variety of soil, in any location, is, of itself, colder than another. The very water which trenching, draining, &c., allow to pass off after imparting its virtues to the soil, if retained on or near the surface by hard impervious sub-soil, becomes itself, by its changes, the source of the coldness complained of. Instead of running off, it evaporates, and by this process abstracts a great quantity of heat from the soil and surrounding atmosphere. The evaporation of a pound of water requires about 1000 degrees of heat; some authors stating it less and others more. Or it reduces 100 pounds of air 45°. This is reversing the experiment of Prof. Johnson, in Espy's "*Book of Storms*," where he says, "a pound of vapor" condensed to water "would heat 100 pounds of air about 45°." The ground to a considerable depth is warmer, by many degrees, where the rain is drained off, instead of being allowed to accumulate and evaporate. Hence this enormous loss of an invaluable stimulus to vegetation.

This chilling and deadly process of evaporation is going on to excess from the time frost comes out of the ground in the spring, till freezing again occurs. At this period, the undrained land, having the most water to freeze, becomes the warmest, say in December, when of no value to vegetation, but rather an injury. For once, forsooth, the undrained land is warmer than the drained! But for this excess of heat in winter, this kind of land must pay dearly in early spring. How is all this? inquires the farmer. Simply because water, in congealing to either ice or snow, has its capacity for heat lessened about one-ninth, and this excess is given off to surrounding bodies; or, in other words, its latent heat is set free. On the other hand, ice, or frost as it is called in the ground, in melting, demands back this same heat, at the rate of from one-eighth to one-ninth of 1000° for every pound melted; and under the surface it does not obtain all this directly from the sun, but through the soil; therefore the more water the colder and longer cold will be the land in spring. Now let the agriculturist go to work and make this "cold, wet, heavy land" of his, the very best he has for any product, trees vegetables, grains, or grasses.

For the New England Farmer.

TO DESTROY CATERPILLARS.

MR. EDITOR:—To kill caterpillars, take a small sponge, tie it to the end of a pole, dip it in spirits of turpentine, thrust it into the middle of the nest, turning it well in the hand, so that the spirits may touch each individual. I have always found this a safe, speedy and effectual mode of disposing of this troublesome pest. I send it to you not because it is new, but because I deem it worthy of always being kept before the people. Respectfully, C. C. S.

Newtonville.

For the New England Farmer.

ARABIAN HORSE "IMAUM."

The Arabian horse "Imaum," or, as is sometimes called, "the Pingree Arabian," was shipped to this country in the year 1842, by Hon. Richard P. Waters, then United States consul at the island of Zanzibar, a portion of the dominions of the sultan of Muscat. About three years since, the writer of this communication called on Mr. Waters, at Salem, Mass., to learn about this horse, and certain of his progeny bred in that vicinity. Mr. Waters informed him that it was an annual custom with the sultan to spend a few months at the above-named island, having with him a numerous stud of the best bred Arabian horses; that the sultan, desirous of showing his regard for David Pingree, Esq., of Salem, requested Mr. Waters to select a horse from said stud, numbering over one hundred horses, and ship him to Mr. Pingree, which request was accordingly complied with, the horse arriving safely at Salem, though subjected to a boisterous and severe passage. Through the politeness of Mr. Waters, the writer was also enabled to see several promising colts in the vicinity of Salem, begotten by "Imaum," and, among others, the fine young horse "Tartar," an engraving and notice of which horse may be found in the *New England Farmer*, Vol. 4, page 467.

"Imaum" has recently been purchased by Messrs. S. M. & A. F. Wait, of Brattleboro', for the improvement of the breed of horses in this quarter. This horse possesses, in much perfection, the symmetrical proportions and desirable qualities so peculiar to the Arabian blood of horses. Height about fifteen hands; head as perfect as could be desired, closely resembling the engraved head of the Arabian, on the title-page of Youatt's Treatise on the Horse; neck arching, and handsomely joined to the chest; withers high; shoulders well inclined backwards; legs sinewy and firmly knit, the tendons standing out prominently from the bone, and the knee and hock joints dropped quite low. He has an elastic step, and a pleasing air and style in every movement.

It is well known that the Arabian blood is the foundation of the great improvement made in the breed of horses in Great Britain and several others of the States of Europe. Particularly have the English breeders effected an astonishing improvement in their horses by crossing them with the Arabian; and now, the pedigree of an English horse must trace back to a cross with the pure Eastern blood, to entitle him to the name of a thorough-bred; and it is universally conceded that the endurance and speed of their horses has been very much increased by the crossing.

An opportunity is now presented to the farmers and breeders in this section, to mingle the pure Arabian blood with that of our Morgan horses; and it need not perhaps be doubted that desirable results will be realized from such a cross; that the height of the Morgan may be somewhat increased thereby, something may be added in symmetry and elegance of figure, in elastic, easy movement; that a certain air and style possessed by the Arabian may be blended with the solid, practical qualities of the Morgan, as a roadster and horse for farm work. The beneficial effects of such a cross will probably be particularly apparent in the second and third generation from the original Arabian sire.

The Messrs. Wait have also a promising young stallion, now five years old, bred by M. S. Hayes, of Farmington, N. H., and got by the Pingree Arabian. The dam of this young horse was got by the Flint or Steele Morgan, and he by the old Sherman, out of a mare by the original Morgan. The colt well illustrates the theory above advanced as to the desirable results to be expected from mingling the Arabian and Morgan blood. He has all that ease, air and style of step and action spoken of, along with the qualities for the harness and for work, and is a remarkably pleasant horse to ride after. F. Holbrook.

Brattleboro', Vt., June 7, 1855.

For the New England Farmer.

DUTIES OF FARMERS AS CITIZENS.

An Extract from Dr. Reynolds' Lecture before the Concord Lyceum.

To sustain the laws of the land and to preserve order and good government is obviously the duty of every citizen. But this is peculiarly the duty of the farmer. For the yeomanry of this country constitutes the main pillar upon which the fabric of our government rests. Without the sustaining hand of the sober, staid, enlightened and strongminded, yeomanry of our land, our government, left to the conflicting elements, that meet and struggle and battle in our cities and political arenas, would scarcely sustain itself a single year. It is the mighty voice of the yeomanry of the country that speaks with power and is heard above the raging billows of political strife. It is said that Paris is France and that the voice of France is but the echo of the voice of Paris. But, thank God, we have no Paris in America, and we have other voices than the voices of our great cities.

Now I do not counsel farmers to be politicians. They are better employed. But they should keep themselves informed, upon the topics of the day and upon the characters and opinions of the men who are in office and who are seeking it, that they may act understandingly and independently. Farmers should be public spirited. They should not consider their own little farms as all the world, but remember that others have interests at stake as well as themselves. They should ever be ready to contribute their part to support good government and to carry forward every laudable enterprise. There are often measures demanded by the public good that do not immediately put dollars in your purse, and yet they are important and necessary measures. They conduce to your comfort. They contribute to the despatch of business. They facilitate intercourse, they tend to ornament the village in which you reside, and render it more respectable, they regard perhaps the preservation of good order and good morals in the community. You cannot afford to dispense with such measures and you should ever be ready to encourage and aid them, within reasonable limits. The proper way to accomplish such works is to take hold of them with your own hands and assist in planning and executing them. Farmers are apt to leave such matters to gentlemen of leisure, who are apt to be liberal and sometimes extravagant in their expenditures, and then complain, after the work is done, of the burden of taxation. The proper way is to give so much time as is necessary to all such matters, and let your voice be heard while the arrangements are being made.

This will generally remove all cause of complaint after they are finished. Farmers are apt to be too modest in the transaction of public affairs, and to allow others, whose judgment is no better, and who have no more at stake than themselves, to assume the control of municipal business, merely because they can talk glibly and have boldness enough to put themselves forward. In this way farmers are often crowded out of those stations of respectability and honor, which they ought to occupy, and which they are better qualified to occupy than many who succeed in reaching them. Notwithstanding farmers constitute by far the most numerous class of citizens, yet most of the offices of honor and emolument are occupied by men from other classes. How rarely do you find the title of honorable prefixed to the name of the farmer! But you say this is because we are not office-seekers. Is it not rather because other men are office-seekers and you do not choose to compete with them?

Then do not complain that your position is not an honorable one and that your sons will not follow their father's business because it does not lead to honor and distinction. What is wanting at the present time is that the farmer should cultivate the soil in a more scientific manner; that his intellect should be as assiduously employed as his hands. And this intellectual activity will prepare him to comprehend and master the duties pertaining to any position in society in which he may be placed. Then when farmers are found filling many of the important and influential offices in the community, their business will appear more reputable in the eyes of their sons, and instead of seeking gold in the sierras of California, that they may enjoy the uncertain honor which results from wealth, they will be content to cultivate their paternal acres that they may in their turn fill the positions of trust and dignity which, in the course of events, will devolve upon them. In this way the farmer's calling will be rendered honorable and he will occupy that position, as a citizen, to which he is entitled, and his interests will receive that attention, from the governments of the state and nation, which they merit.

They will not be laid on the table because no political capital can be made of them. But his voice, when it is heard in the public councils, will be regarded. His influence will be felt and will be felt for good, for he has no private interests to advance. His interests are identified with the public good and he is ever ready to bear his share of the public burdens. In the public prosperity he prospers, and in the public joy he rejoices.

THE FROG.

Of all the funny things that live,
In woodland, marsh or bog,
That creeps the ground, or fly the air,
The funniest is the frog.
The frog—the scientificest
Of nature's handiwork—
The frog, that neither walks nor runs,
But goes it with a jerk.

With pants and coat of bottle-green,
And yellow fancy vest,
He plunges into mud and mire—
All in his Sunday best;
When he sits down, he's standing up,
As Paddy O'Kinn once said;
And for convenience sake he wears
His eyes on top of his head.

You see him sitting on a log,
Above the "vasty deep,"
You feel inclined to say, "old chap—
Just look before you leap!"
You raise your cane to hit him on
Hig ugly looking mug;
But ere you get it half way up,
Adown he goes, kerchug!

He keeps about his native pond,
And ne'er goes on a spree,
Nor gets "how-come-ye-so," for a
Cold water chap is he;
For earthly cares he ne'er gets drunk,
He's not the silly fool,
But when they come he gives a jump,
And drowns 'em in the pool.

KEEP FRUIT TREES STRAIGHT.

Trees in an open exposure often acquire a leaning position from the prevailing winds. This should not be suffered beyond a certain stage of the tree. When as large as one's wrist, they should be set up erect, and, indeed, thrown into the wind at an angle of ten or fifteen degrees; in order to bring them ultimately into a straight position. This is best done by obtaining crotched limbs from the woods, eight to twelve feet long, and placing the butt end, which should be sharpened, on the ground, and the crotch end either against the trunk, immediately beneath the branching point, or against a large outer limb, if more convenient, securing it from chafing in the crotch, by a padding of straw, or litter, and setting the tree at once up to the desired angle of elevation. Loosen, also, the ground on the windward side of the root so that it will not bind, and the work is accomplished. Let this be done when the tree begins to make its summer growth, or soon after leafing out. One season, if the tree is thrifty, will be all that is required. If, however, it be obstinate, repeat the trial another year. The remedy is sure. Even large trees, which have acquired a permanent lean, may be thrown into an erect posture, by loosening the earth at the root, and occasionally cutting off an obstinate large root, without injury to its growth, and thus be made sightly. An erect tree will be longer lived and more fruitful than a leaning one, and not half so subject to casualty as if left to its own guidance.—*Exchange.*

For the New England Farmer.

RURAL TASTE.

DEAR SIR:—I am one of those who believe in the cultivation of a taste for the beautiful as well as the useful. The value of an estate is always enhanced by some attention paid to the principles of taste. We have in our country few ivy-clad ruins or venerable antiquities, whose associations lend a charm, independent of their inherent beauty to the landscape; but we have, nevertheless, the power of increasing greatly the attractiveness of our country-seats by the cultivation of our noble forest trees, and taking advantage of the natural swells and undulations of the ground. It should be borne in mind that it costs no more to erect a building in its appropriate place, than in an inappropriate one; yet one-half or three-quarters of our farm buildings are dumped down, with the most perverse indifference apparently to every consideration of taste, in hollows, close to the road, exposed to its dust, and allowing no room for shade trees or shrubbery.

Perhaps nowhere are instances of this kind more numerous than in Bristol county, and particularly in the vicinity of New Bedford, a city distinguished by its beautiful residences and abundant shade, its streets over-arched with luxuriant foliage, and its dwellings, many of them, embosomed in trees. The instant we get into the country, the genius of good taste seems to have fled. The roads are lined with small farm-houses, either unpainted and dirty, or painted painfully white, with the most vivid of green for blinds, with a front yard of from twenty to thirty feet deep, so near to the road that the passing travellers can see clear into the parlors, (if not sealed up by the everlasting pale-green window curtains,) with no shade trees to lessen the glare of the sun, and no lattice, with climbing rose or delicate wood-bine, to diminish the bare poverty of their appearance. The barns and out-houses are often placed nearer the road still than the house, so that, on approaching the place, these unsightly buildings greet the eye first.

Now if, instead of thrusting his farm-house so closely upon the road, the owner had carried it back some one hundred yards or more, placed it upon a gentle swell, planted some forest trees around it on either side, so as to form, in time, a sort of natural arch, and painted it a warm stone color, which would have harmonized the unapproachable tints of nature instead of half neutralizing them, disposing shrubbery gracefully around, adapted to the lay of the land, how much more comfortable to his family would he have made it—how much more attractive to the eye, and more valuable in case he should wish to sell it, and how small would be the additional expense. AGRICOLA.

Dartmouth, Bristol County.

GUANO.

We give below two articles on the subject of guano—one from Prof. NASH, and the other from the *Country Gentleman*. If the charges intimated in the articles are well founded, the name or names of the persons implicated ought to be made public instantly. We shall not hesitate to give them publicity whenever they come to our knowledge, accompanied by evidence that they are correct. Prof. NASH says:—

We do not condemn the use of guano indiscriminately. We have always, in *measured* tones, commended its use on poorish, out-of-the-way lands, beyond the reach of heavy manures. For specific purposes, we have advised all farmers to have it on their premises. This year, in view of prospective high prices for produce, it may be wise to apply it on all lands and for all purposes. If any one fails to do it, and then should be sorry, let him not lay the sin at our door. Neither do we wage indiscriminate war with all dealers in guano. What we *have* said is, that in the trade, somewhere between the birds' dung-hills and our farms, there is prodigious rascality to be looked out for, and that if we escape this and get the best article, still it will not pay, in the ordinary course of inland cultivation, except in those years when produce is uncommonly high. Taking all that is sold under the name of guano, and applying it to the general purposes of farming, it will return to the farmers, in the aggregate and in the long run, but about half the purchase money. We say *in the aggregate*, because it will be admitted that those who purchase a spurious article are losers; and we say *in the long run*, because it is as clear as sunbeams, that when you take great crops from the land, without putting on more than 300 lbs. to the acre, which is 2¼ ounces (what you might well carry in a vest pocket,) to a ton of soil, you exhaust the land. If, then, you purchase a bad article, you lose outright; if you purchase a good one, there are heavy drawbacks upon the apparent profit. There are plenty of dung-making birds in Peru, and we believe there are more in this country; not birds exactly, we should not dare call them so, lest the real birds should pick our eyes out; but something, without wings, not having one upward tendency, which concocts and sells to farmers more so-called guano than all that is brought around Cape Horn. As proof in part, we publish the following from the *Country Gentleman*, omitting names of persons, as that paper has done, and also of places, which it has not.—*The Farmer, by J.*

GREAT FRAUD IN GUANO.—Every one acquainted with the guano trade of Great Britain, is aware that adulteration is carried on to an enormous extent. The laws are stringent, and the penalties in case of detection severe, yet the profits are so large, and the difficulty of *proving* the fraud so great, that numbers of dishonest men are willing to brave the chances of detection. The agricultural press, when in the hands of honest, independent men, untrammelled by business connections, is the great safeguard against these and other impositions; but, though the British agricultural journals are mostly of a high tone and character, their price prevents an extensive circulation; and, indeed, comparatively few farmers take any agricultural paper whatever. Under such circumstances, therefore, it is no wonder that fraudulent manure dealers reap a rich harvest.

We have long been convinced that there were parties in this country engaged in manufacturing various artificial fertilizers, which are of little value, and we have done our part towards exposing their fraudulent practices. We were also aware that inferior guanos are often sold under an assurance that they are equal or superior to the best Peruvian, but we had no idea that there was any one in this country engaged in the *manufacture of guano*. We are sorry to say we have been deceived. Numerous as are our agricultural papers, great as are their circulation and influence, they are found insufficient to prevent unscrupulous men from *attempting* to palm off on the credulous farmers of our broad domain a comparatively worthless article, at a high price, under a *false name*, and, what is more to be regretted, it is one of the professed friends and teachers of scientific agriculture that is engaged in this deception.

How we discovered this fraud, we are not at liberty to state. Suffice it to say, that some six weeks ago, we were informed that an article, known as Mexican guano, was taken to an establishment near ——, and there mixed with plaster, salt, sugar-house scum, Peruvian guano and quick-lime, the whole ground up together and put in bags, marked "CHILIAN GUANO."

Following the directions of our informant, we proceeded to ——, and there found a large heap of about 250 tons of Mexican guano, and some 200 tons of the *manufactured article* in bags, marked "Chilian guano," as we had been informed. We also learned that a considerable quantity had already been shipped to New York and Boston, and one gentleman said he believed a good portion of it had been sent to England.

In New York we were offered the Chilian guano, if we would take it in quantity, at $35 per ton.

We took samples of both the Mexican and Chilian guano, and made careful duplicate analyses of them in the laboratory of Prof. Carr, of this city, chemist to the New York State Agricultural Society. The following are the mean percentage results of the analyses:

MEXICAN GUANO.

Sand	0.5
Organic matter	5.0
Phosphate of lime	26.0
Carbonate of lime	68.0
	99.5

CHILIAN GUANO.

Water	4.0
Sand	2.4
Organic matter	15.3
Phosphate of lime	24.5
Sulphate of lime, (plaster)	9.5
Chloride of sodium, (common salt)	6.2
Carbonate of lime, (chalk)	37.6
	99.5
Ammonia	1.6

Having obtained these results, we proceeded once more to ——, and there received the following account of the modus operandi, adopted at the factory.

The bags are first marked CHILIAN GUANO; they

are then moistened with water, and laid in a heap, in layers, *with a quantity of Peruvian guano between each layer.*

The sugar-house scum is pounded fine. Three barrowfuls, of "five half-bushels" each, then are mixed with six barrowfuls of Mexican guano. To this are added 1½ bushels common salt, 1 bushel of plaster, 3 bushels Peruvian guano, and one-half bushel of quick lime. When the Peruvian guano and lime are added, "they make it tremendous strong." In other words, the lime sets free the ammonia of the Peruvian guano, and gives the manufactured Chilian guano a strong smell of hartshorn, which, to the unreflecting, is a sure indication of a valuable guano.

The floor, where the bags were filled, was covered with Peruvian guano, in order to make the article look as much like genuine guano as possible.

What is Chilian guano, and why is this name given to it instead of the better known guano? The only genuine Peruvian guano in this country comes through the hands of BARREDA BROTHERS, and has their mark upon it, so that it would not be easy to sell a spurious Peruvian guano. Chilian guano is subject to no such regulations, and the books describe it, when "fine"—and the manufactured article is made fine by grinding—as a "*very* valuable variety, equal to that of the *very best* Peruvian." The name, therefore, has been chosen with consummate cunning.

SALT FOR QUINCE TREES.

The fact is well known, perhaps, to most of our readers, that plum trees, generally, are much benefited by copious applications of salt; and that one species, called the "beach plum," grows on the margin of salt water, where its roots are washed by the tides. Frequent experiments have also demonstrated of late that very decided advantages attend the application of salt to most plum trees. It seems, likewise, from the following extract from a communication in the *Horticulturist*, that the quince tree is equally benefited by it. The writer says:—

"When I first came to this section of the State, twelve years since, I found on the premises I purchased half-a-dozen fair looking quince trees, but which I understood had never borne any fruit. On inquiry I understood the quince tree did not bear well in my neighborhood, and that my neighbors thought it useless to plant this fruit tree. In making a drain from my kitchen, it so chanced that it emptied its contents near the foot of one of the quince trees. This tree, the season after, came into bearing, and as a good deal of pickle had been emptied into this drain, I supposed the salt might have produced its fruitful state. Acting on this supposition, I commenced applying salt to the other trees, early in the spring, at the rate of three quarts per annum to each tree, on the surface of the ground under each tree, the trunks of which were then about as large as a man's wrist. They came into bearing the following season, and have produced me good crops ever since."

Since writing the above, we have seen salt recommended in a Pennsylvania paper as one of the best stimulants that can be applied to the quince tree. The writer, however, recommends its application in compost rather than directly to the trees in its raw state, and with about an equal quantity of caustic lime or unleached house ashes.

For the New England Farmer.

PLOWS AND PLOWING.

I have looked with some interest for the replies to a "Tiller of hard and stony land," having myself some two years since made a similar inquiry. I have had some experience since that time and can perhaps lend the "Tiller" a helping hand. Of the plows made fifty years since I am no judge, but a cast iron plow made thirty years ago I held many a day, for at least a dozen successive years, and am of the opinion it was far superior on a stiff stony soil, such as I cultivate, to the fashionable plows of later years.

This stiff heavy loam is generally accompanied with abundance of stones, doubtless for good and wise reasons, and I never pick off those small enough to be crushed under the surface by the roller. Now the pattern of a plough to keep steady among these stones, and well pulverize this soil, my limited experience leads me to think is a short mould board, wide behind, and high beam. It seems to be the general opinion of the "*Farmer*" writers, that a good plow is a good plow anywhere and everywhere, on the sandy plain or rocky hillside, the stiff and tenacious, or the light, friable, easily worked soil. The farmer at Brookline advises to settle the matter by experiment; this is costly business for the *country* farmer, and he has a right to expect the matter is already settled. In these times of great improvements he has a right to expect that when he describes the soil the dealer will show him the plow best fitted to work it.

After a fruitless inquiry, through the columns of the "*Farmer*," I visited the plow stores in Boston, and was soon attracted to a family of plows, in the Quincy Hall store, marked "deep tiller." Mr. Nourse informed me that these were the *latest improvement*, but I saw instantly they were in fact a return, in a great degree, to the improvement of thirty years ago. I bought one marked "Deep Tiller—stubble—No. 33," and plowed my old ground with it with a satisfaction I had not felt in plowing for years. I rigged it with cutter and roller for breaking up grass, and have used no other plow but a horse plow since. To conclude I would say to brother "Tiller" that if the soil he wishes to plow is like mine, i. e. a stiff, heavy loam, with stones to match, this is the plow that will do the job for it.

Andover, June, 1855. N. N.

HOW THEY USED TO PLOW.—In some parts of Scotland, in former times, the plows used to be drawn by four horses abreast and required the assistance of three men. The business of one man was to drive. For that purpose, he placed him-

self between the middle horses, with his face towards the plough, to guide it straight, and in this position he stepped backwards with the reins in his hand. Another walked behind the horses with a cleeked staff, which he fastened in front of the beam, and by means of this regulated the depth of the furrow, by raising or lowering the plow, as occasion required. The plowman followed with hold of the stills; and in this formidable and ludicrous manner they repeated their attacks on the soil.

In harvest, a basket machine was placed on horseback, for carrying home the grain; and persons were employed on each side with forks to keep it in a proper poise. It is said that the practice is yet to be met with in Galloway.

Many practices existing even at this day in Ireland are still more ridiculous. Mr. Arthur Young tells us that in Donegal he has actually seen horses plowing by the tail!—*Port. Trans.*

For the New England Farmer.

"GRAVEL WALLS."

Mr. Editor:—The recent demolition of several gravel buildings, and the denunciation of the press in one or two instances of the "*gravel wall fever*," as they are pleased to term it, should, perhaps, dictate to the writer silence, instead of offering any statements in answer to the inquiries of "A Subscriber." But in view of the onerous demands for all materials and labor connected with buildings in the usual mode, some will be inspired, despite all denunciations and mishaps hitherto, to obey the teachings of the spider, and try again until unfailing success crowns the effort. It is not a very unusual occurrence for brick buildings to fall, even some which were supposed to have been well built; but if well built upon a good foundation, it is believed there is as little danger from gravel as from brick or stone.

There were many buildings erected in this State during the last year, of gravel and lime; of those covered in, there has been to the knowledge of the writer three totally destroyed, and two or three partially injured.

The question arises, is this destruction owing to the building material, the severity of the climate, or to the ignorance and heedlessness of the builders? There are those who will, without hesitation, pronounce the latter as the sole cause of these disasters. And being of that opinion, I will, in conformity with a promise, proceed to answer the interrogations of your "subscriber."

Persons contemplating the erection of buildings of this kind, should avoid the off-hand, haphazard mode, recommended in a book which gave the first impetus, in this section of country, to this mode of building. Under this mode, as well as under all others, the building should be under the supervision of a good builder, and one who has theory and experience in building, and not entrusted to those who know enough only to pour water on to lime, and to shovel gravel. A dry site is the first desideratum. Next, proximity to a good coarse gravel bed, free as possible from loam. Blue gravel will answer, but light is thought to be the best. If the gravel is fine, it is not suitable. If coarse gravel predominates, after having run it through a screen of quarter inch mesh, if the large round smooth cobble is abundant, the larger ones should be rejected,—the lime having less affinity with them,—and rough uneven stones substituted, or what is better, stone chips from a quarry or from a stone yard. These may be put into the wall as large as its thickness will admit. The materials thus selected or fixed upon, the next important point when the cellar is excavated (and in many situations the cellar will furnish the material for the wall,) a good, substantial foundation of stone, laid in mortar if it can be afforded, should be made;—as good a foundation as would be required for a stone or brick building, and an underpinning eighteen inches above the surface of the ground, laid in solid masonry of brick or stone. Slate stone for the underpinning is the best, as the slate will hold the outer finish better than brick.

The foundation completed, planks of suitable length, proportioned to the size of the building, and twelve or fifteen inches in width, should be made ready, by planing the side that is to go next to the wall; if they are rough, they will break its surface, as they are raised up. Pine plank is best, as it is more easily worked. Hemlock is not suitable as it will warp. Iron rods ¾ of an inch size of sufficient length to pass through both plank when set for the thickness of the wall, should be prepared, by boring one end headed, and the other tapped, and a thumb nut fitted to the screen end; these rods should pass through the plank at proper distances to keep them in position, then place them edgewise on the underpinning and the builder is ready for the material for the wall.

We now come to a very important part of the operation, and that is the preparation of suitable adhesive mixture. On this point very serious mistakes have been made during the last year, and is one prominent cause of the disasters which have happened. This part must be left for another communication. W. H. N.

Waltham, April 20.

For the New England Farmer.

WASH FOR TREES.

Mr. Brown:—I would like to have you inform me in what quantities whale oil soap should be used in washing stems of apple trees, for I have about six hundred to wash; or is there any thing that you would recommend in its stead as being better? Last season I washed them with potash water, with cow manure added.

Yours, D. E. J.

Remarks.—Nothing, in our opinion, is better than common soft soap and water. It is perfectly safe, easily applied, and answers all the desired purposes.

To prevent Bots in Horses.—A person of much experience in veterinary science is never troubled with this disease in his horses. His simple practice during the fall months is, to keep a greasy cloth in the stable, and once a week rub with it such parts of the animal as may have been attacked by the nit-fly. Grease destroys and prevents the eggs from hatching.

For the New England Farmer.

GARGET.

MR. BROWN:—At this season of the year, many cows are afflicted with what is called garget—the premonitory symptoms of which are, want of energy, dullness, running at the nose and eyes, loss of appetite, &c., &c., and, unless successfully treated, usually results in seated inflammation. The udder is generally the seat of inflammation, which, in severe cases, becomes very much enlarged, and has the appearance of being filled with knobs, or bunches of different forms and sizes, and many times extremely sensitive upon the slightest pressure; not unfrequently tumors, from which pus is discharged, and the cow rendered nearly worthless for the season, and may be entirely worthless for the dairy ever after, and only fit for the butcher. I know many slight cases of this disease have been successfully treated by giving the animal garget-root, sulphur, salt, saltpetre, &c.; but will you, or some of your many readers, inform me, through the medium of your monthly publication, the best method of treatment for a severe case?

REMARKS.—In reply, we copy from Youatt and Martin on Cattle. Perhaps some of our readers may suggest a simple remedy. There is annually very considerable loss to farmers from this disease.

GARGET, OR SORE BAG.—Too often, however, the inflammation assumes another and worse character: it attacks the internal substance of the udder; one of the teats or the quarters becomes enlarged, hot, and tender; it soon begins to feel hard and knotty; it contains within it little distinct hardened tumors or kernels. In a short space of time, other teats or other quarters probably assume the same character. The milk has coagulated in the bag to a certain degree, and it has caused local inflammation where it lodges. This occurs particularly in young cows, after their first calving, and when they are in a somewhat too high condition, and it is usually attended by a greater or less degree of fever.

The most effectual remedy for this, in the early stage of the complaint, is a very simple one; the calf should be put to the mother, and it should suck and knock about the udder at its pleasure. In most cases, this will relieve her from the too great flow of milk, and disperse all the lumps.

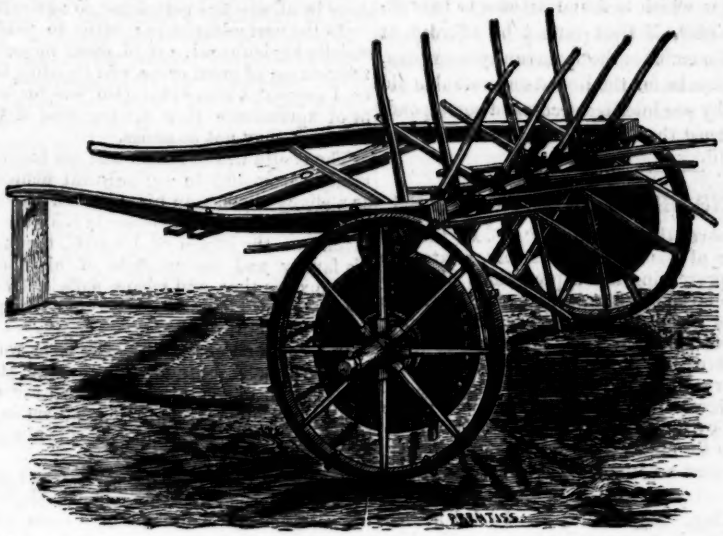
The causes of garget are various; the thoughtless and unfeeling exposure of the animal to cold and wet, at the time of or soon after parturition, the neglect of physic or bleeding before calving, or suffering the cow to get into too high condition, are frequent causes. So powerful is the latter one, that instances are not unfrequent of cows, that have for some time been dried, and of heifers that have never yielded milk, having violent inflammation of the udder. The hastily drying of the cow has given rise to indurations in the udder that have not easily been removed. An awkward manner of lying upon and bruising the udder is an occasional cause; and a very frequent one is the careless habit of not milking the cow clean, but leaving a portion in the bag, and the best portion of the milk too, and which gradually becomes a source of irritation and inflammation in the part. Connected with this last cause is the necessity of the advice already given, to milk the cow as clean as possible, at least twice in the day, during the existence and treatment of garget.

Treatment.—A little time before and after calving, particularly in the first birth, often too at other periods, there is observed on the udder a painful inflammatory swelling: the organ is hard, tense, hot and red; the entire, or only a part, is affected with swelling. The animal has rather high fever, a sharp thirst, the mouth is dry, and there is but little appetite; the secretion of milk is more or less diminished. If it has been caused by external injury, frequently moistening the part with *arnica* water is sufficient to cure it; a dose of it should also be taken internally every day. *Arsenicum* should be employed only when the disease has been neglected, or when there have supervened gangrenous inflammation or ill-conducted ulcerations, with hard and everted edges. After cold, the cure is readily obtained by *aconitum* at first, then *bryonia*; if the latter does not suffice, *dulcamara*. *Chamomilla*, also, has frequently proved useful.

CLAY.

On sandy soils, which are deficient in cohesibility, and which are consequently liable to wash, and to be blown by winds, no application is more valuable than clay. This earth is a compound of silica (sand) and alumina (clay)—not merely mixed or mingled together, but existing in a state of chemical combination. Most of the natural clays, are mixed with an extra quantity of sand, or silex, which is sand free from extraneous substances, and in various degrees of fineness. The only methods of separating the silex from the pure clay, is by washing or boiling. The silex, however, which exists in a state of chemical combination with the clay, can be separated from it only by the action of chemical reagents. "Clay differs in appearance from silica and alumina, and its properties do not correspond in that degree which might be expected from the proportion in which these two earths are united in it. It has peculiar properties which a mechanical mixture of silica and alumina cannot be made to exhibit. Nature seems, indeed, to have reserved to herself the power of effecting this intimate union, for although means have been discovered for effecting the combination for silica and alumina by chemical processes, the compound thus formed does not constitute a true clay."

The very lightest and thinest soils, by having a sufficient quantity of good clay incorporated with them, will be capacified for producing all the variety of crops ordinarily cultivated on the farm, and will be so far mechanically and constitutionally ameliorated by the admixture of this earth, as never again to become oppressed with the sterility with which they were primitively cursed.



HAY MAKER.

Last week we gave the cut of a Mower, with some remarks and testimonials in its favor. We present this engraving so that the farmer may have before him such of the labor-saving implements as promise to be useful, and may learn something of their construction and merits.

We copy from the circular of Messrs. *Ruggles, Nourse, Mason & Co.*, as follows:

"We would also invite your attention to a Hay Making Machine, described and shown below. This machine, we believe, will prove a great acquisition in facilitating the business of hay harvesting. Machines for the purpose, much more expensive, but not more efficient, have long been used in England and approved.

"We have made several trials of this machine for making and turning hay. Its operation was very satisfactory to all who witnessed its work. It is worked by one horse; a boy rides the horse and spreads, shakes or turns an acre in twenty minutes. The hay is raised from the ground and thrown into the air from six to ten feet, falling evenly distributed over the whole surface, leaving it so very light that the air and sun act forcibly and equally on the whole.

"Being enabled by the Mowing Machine to cut the grass after the dew is dried off, and by the spreader to stir or turn it often, it is supposed that generally hay may be cut, cured and put into the barn the same day. In addition to a great saving of labor, much would be saved by putting the hay in the same day, both in labor and risk of weather."

Leaves.—Every person conversant with vegetable philosophy is aware that the all important requisite, in the growth of fine fruit, is a good supply of big, vigorous, healthy leaves. A tree which he kept defoliated for a single season must die; and fruit growing upon branches which are deprived of their leaves cannot ripen—examples of which are furnished by the instant cessation of growth and ripening of fruit upon trees which become stripped by leaf blight. In one instance, a dense mass of plums remained half-grown and flavorless for several weeks, in consequence of the premature dropping of the foliage—a second crop of leaves three weeks afterwards effected the completion of their growth and their ripening to honeyed sweetness. The editor of the *Michigan Farmer* mentions the following interesting case illustrating the same principle:

"Mr. Moro, of Detroit, has a magnificent grape vine, spreading itself over one side of his house, which had been in September richly laden with fruit. After the cluster was formed a cow entered the enclosure, ate the leaves entirely, but left the fruit untouched. The consequence was that upon that portion of the vine, which was beyond the reach of the cow, there never were finer clusters, while upon the portion from which the leaves were removed, the clusters dwindled away and came to nothing, and that, too, up to the very line of separation between the mutilated and unmutilated portions."—*Maine Farmer.*

To Correspondents.—Several excellent articles, on various topics, and some agricultural poetic

contributions, are on hand, which shall appear soon. We hope our correspondents will "make a note" of their experiments and operations, as they go along with their crops, and thus supply the data upon which to found articles to be written next winter, if time cannot be afforded at present. We embrace the opportunity to express, again, our thanks for the liberal and valuable aid afforded us by our intelligent corps of correspondents. We trust the advantages are mutual.

TRAPPING GRUBS AND CUT WORMS.

A writer over the signature of "C. Q." in the May number of the *Michigan Farmer*, relates his success in preventing the depredations of these pests of the farmer by a new and very ingenious invention of his own. As neither fall plowing nor any other generally known method is much to be relied upon, probably many may be induced to try this newly-proposed method. If found as successful as "C. Q." represents it, we shall be happy to make a report thereof, and to be the organ through which those who may find it useful may send a vote of thanks to the original inventor.

"Last spring," says "C. Q.," "I tried an experiment with the 'varmints' which I will relate for the benefit of whom it may concern." He planted his corn on a clover-sod plowed in spring. While planting, he found plenty of the small grubs. The corn was planted about the 20th of May, and as soon as it came up they commenced their mischief. Knowing no reliable or certain way of saving the corn, he concluded to trap them. For this purpose, he took a round stick, 3 or 4 feet long, and about 2 inches in diameter, and making one end sharp, and taking two rows at a time, he made from two to four holes 4 or 5 inches deep in or close by every hill. After fixing several rows in this way, he waited to see the result. On examination he found that almost every hole had one or more worms in it. In one hole he counted as many as six. He then went over the whole field in the same way, and the result was that hardly a hill of corn was destroyed after the holes were made, while his neighbor's corn just over the fence, which was on ground plowed very early, was more than half cut off with the worms. "It might be supposed," says "C. Q.," "that when the fellows fell into the traps they would bore into the side and escape; but on watching them, I found they would always fall back again, when about twenty-four hours of sunshine and starvation would put an end to them. They usually commit their depredations in the night, and while crawling around to find the corn they tumble in." An additional recommendation of this method is, that the birds will not pull up the corn, when they find plenty of grub already provided for them.

"C. Q." states farther that a portion of this field of corn looked green and flourished luxuriantly, while another portion looked pale and yellow. To the former he had applied (a tablespoonful to each hill) a mixture of 2 parts lime with 3 parts ashes. The latter had no such application.—*Country Gentleman.*

For the New England Farmer.

CURE FOR RHEUMATISM.

I suppose the *New England Farmer* is intended, as its name indicates, to be the organ of farmers in all matters pertaining to agriculture.

As the agriculturist has duties to perform not strictly agricultural, yet of equal importance to the rearing of great crops, and breeding fine horses, I suppose a communication, less for the benefit of agriculture than for the good of the agriculturist, may not be amiss.

The health of the farmer and his family is certainly paramount to agricultural achievements, as a slight disease in his physical system may blast all his hopes of success in his common avocation, or the illness of his wife, the mother of his family and the mistress of his household, may tax his time and means sufficiently to keep his pecuniary affairs "in statu quo" or put them on the downhill track.

In a cold and changeable climate as we have in Vermont, a disease often provoked, to those whose business keeps them much in the open air in all kinds of weather, is rheumatism in some of its great variety of forms. This is always a disease of the joints.

Each joint in the body is covered and protected by a white, smooth, glistening membrane, called "cartilege," and white fibrous tissues generally, such as tendons, (the extremities of muscles,) capsules, ligaments and bursa, for protecting, strengthening and lubricating the joints.

Rheumatism is an inflammation of some of those fibrous tissues about the joints, and acute rheumatism is an extremely painful disease. It is usually, if not always, produced by cold obstructing the perspiration of the skin, etc. Sleeping in damp sheets, going with wet feet, or exposing the body to cold when heated, and wearing damp or insufficient clothing, are the immediate causes which produce this very troublesome malady. Usually that class of persons who wear the lightest fabrics for garments, and those who are too poor or too penurious to provide themselves garments adequate to the autumnal and vernal changes in this climate, are most liable to rheumatic affections.

Spring and fall are the seasons that people are most afflicted with what is called chronic rheumatism, attacking the shoulders, hips, back, or any other joints in the body, and often lasting for months, disabling the patient for performing all kinds of manual labor.

Now it is a fact not enough appreciated that those who provide themselves with good woollen shirts and drawers and other woollen garments are most exempt from attacks of this kind. Such flannel and woollen garments are not only preventives of rheumatism, but very often the sole means of cure.

A near neighbor of mine, some three or four years since, was attacked with pain and lameness in the left hip joint, in the autumn, so as to disqualify him for all kinds of labor. His physician recognized the disease at once, and very wisely prescribed woollen shirts and drawers. He thought he could not afford the expense, but paid dollars for patent medicines, and laid idle through the entire winter, and was forced to believe himself suffering from ulceration of the hip joint,

commonly called "hip complaint," so great were his sufferings at times. He made arrangements to sell his little farm, when he again encountered his old physician who once more told him to get *the woollen shirt and drawers*. At last they were procured, and to the patient's astonishment his pain and lameness immediately disappeared. From that time to the present, whenever he lays aside his woollen garments he is attacked with the same disease, but never when he wears them.

So we say to such as are troubled with rheumatic diseases, use woollen undergarments, and to say the least you may calculate with safety that you will be much benefited. By woollen garments, we mean garments made of the products of sheeps' backs, and not those fabrics known as cotton flannels, which are much better conductors of caloric and far inferior to woollen as garments. C.

Guilford Centre, Vt., April, 1855.

POOR FARMING AN EXPENSIVE BUSINESS.

The truth is, poor farming is an expensive business. The cost exceeds the income. If from a very low grade of farming, which must of course be unprofitable, we ascend to a better condition of the art, we shall come to a point where there is neither loss nor gain; the income equals the outgoes; the ends meet, as they say. And this, if we understand these matters, is the very condition in which nine-tenths of our farming now is.

The farmer of a hundred acres puts on his farm in his own labor, in the labor of his wife and his children, in taxes, insurance, &c., $500. And he takes off in some marketable produce or for home consumption, $500. "The ends meet;" and if there were no better way he need not complain; for he is working his way through the world as quietly and as easily as most men; for the development of high moral qualities he has the advantage of most others; and what is more, he has the best possible means of training his children to those habits of industry and frugality which more than conspire to make them good men and women and worthy citizens. Let him not, therefore, complain. But if there is a better way, let him fall into it. We do not believe that farming is necessarily limited to the operation of putting on $500 and taking off $500, and living by the operation, only because what is put on is mostly in the form of labor done by the family. If a farm will give $500, with the labor of one man, it will give a great deal more with the labor of two men; and the excess will more than balance the wages and board of the second. Instead of putting on $500 and taking off $500, the better way is to put on $700 and take off $900; and then to put on $900 and take off $1200. There is doubtless a limit beyond which the income could not be made to increase above the expenditures; but very few of us are in danger of going beyond the limit. There is much more danger of falling short of it. Our standard is too low. Men are afraid to trust their land, lest it should not pay them. It is the best paymaster in the world.—*The Farmer, by* J. A. Nash.

SPECIFIC MANURES.

No very important movement for the general good ever yet had uninterrupted success, and as it is struggle and opposition that best acquaints, even the advocates of any measure, with its strong and weak points, it is not best it should; indeed, for this reason fair and honorable opposition is to be desired, but the attacks of calumny, deceit and meanness are particularly difficult to be met.

No set of men ever had more uphill work and greater difficulties to face, than the advocates of improved agriculture, and that they have triumphed through them, and in spite of them, is shown by the strong interest felt by the community in general in agricultural matters; in the establishment of means for the diffusion of useful knowledge amongst the rural population, in our well attended autumnal cattle shows, in the growing use of various specific manures, &c.

Any careful observer of the respective theories and "isms" of the day would decide that the agricultural is the most popular one, and that it is likely in the end to be triumphant; but let no one suppose this popularity has come unsought, or with small effort. How many men have devoted years of gratuitous labor to the cause; remember the untiring efforts of Pickering, Coleman, Buel, Phinney, Lowell and numerous others; or in our own day, it is only necessary to point to the Massachusetts Board of Agriculture, who, with an immense amount of gratuitous, and apparently almost thankless labor, persevere undismayed in their efforts to improve and benefit the agricultural condition of their friends and neighbors, whether of the same town, county or State.

It is most worthy of laudatory notice, that twenty or more men could have been selected from various parts of the State, who would be willing to devote a large portion of their time, unremunerated, to the duties of the Board, and renders them deserving of the State's gratitude. We are apt to but lightly esteem advice gratis, and it is not impossible that these men's efforts are underrated for that very cause, and perhaps many who are aware of their existence suppose them to be the incumbents of fat offices, which are mere sinecures, instead of which they give a very large amount of time, labor and money without any other present or prospective reward than the success of their measures, and the benefit of their countrymen.

Since the first establishment of this Board, in spite of opposition, and of the narrow-minded attacks of men who judge only by the evidences of their senses, they have accomplished an immense amount in the way of undermining prejudices, enlightening darkness and introducing improvement.

But they too have to meet the low-minded and mean opposition, and to suffer from the most aggravated and least defensible attacks, the stabs of pretended friends; they, and the agricultural press besides, have been for years urging the extensive trial of specific manures, whether to supplant, assist, extend or enhance the benefits and use of bard-yard manures.

To secure a judicious application of the material used, repeated directions have been given of the amount to be used, and the best way of applying it, in some cases, even, with details of carefully tried experiments, as farther guides; and as a result of this action, a larger quantity of specific manures has been sold this year than ever; how disastrous, then, must be the effect upon novices, who have been excited to try such aids to culture, by this continuous advice, if they buy in good faith,and relying upon the assurance of the seller, a spurious article, perhaps at a high price, which will prove either useless or perhaps positively injurious to their crops.

If, for instance, any one purchases guano, trusting to the statement of the vender that it is a genuine and valuable article, paying $40 or $50 a ton for it, which is in reality a miserable combination of lime, plaster, salt, coal ashes, and a pinch of guano to give it smell and color, (see analysis of Chilian guano below, taken from the *London Agriculturist* of May 24,) which will give no remunerative return for its application, he does not condemn the article he used, so much as the spirit of improvement which prompted him to make the trial, and the entire discredit of the operation falls, not as it should on the head of the vender, but upon the advocates of progressive agriculture; and the untiring efforts of the friends of improvement are all laid under suspicion. But such must this year be the fate of many, for it has been discovered by the editors of the *Country Gentleman*, that an article denominated Chilian guano has been largely manufactured, and sold over the country, and some even shipped to England, at the price of $40 a ton, that is not worth $10 the ton. It is composed of

Water	4.0
Sand	2.4
Organic matter, (Sugar-house scum)	15.3
Phos. Lime	24.5
Plaster	9.5
Salt	6.2
Chalk	37.6
	99.5

of which there is 1.06 per cent. of ammonia—and this abominable preparation is endorsed by Dr. Hayes of Massachusetts, and Prof. Mapes, of New York, and some others, and has been widely recommended as a valuable fertilizer.

What a terrible stab from behind is this, coming, too, from the very men who make the largest protestations of zeal and enthusiasm in the agricultural cause. It is an outrageous and abominable piece of quackery and imposture, nor can too much indignation be felt against its perpetrators; no confidence will hereafter be felt by the victims of this fraud in any so called agricultural improvements. But we cannot too strongly urge upon those who have suffered this year, not to be discouraged in the future, but with renewed zeal make other efforts, only hereafter being careful to purchase their material from men of solid and well-established reputations, and never to purchase any recommended preparations because they are cheap, nor unless heartily endorsed by men who can be depended upon.

It is to be desired that the exposure of this humbuggery as published in the *Country Gentleman* and *American Agriculturist* should have the largest publicity, that the public may become so thoroughly awakened to a sense of the benefit good special manures may do, and of the worthlessness of the bad, that there may be a larger use of the former every year. And we cannot help believing that those interested in agriculture in our Commonwealth have so large a share of good sense as to be able to discriminate between the good and the bad,and while they award the largest share of praise and encouragement to all who are honestly laboring to forward the cause amongst us, no less thoroughly to condemn all quacks, and venders of patent agricultural medicines, whether for men, animals or the crops.

For the New England Farmer.

EFFECTS OF THE WINTER ON FRUIT TREES.

CORRECTION.

FRIEND BROWN:—I have no desire to appropriate too much space in the *Farmer* to myself, but noticing several serious mistakes in my communication which appeared in the last number, I venture to correct them.

In the 19th line, for "9°" and "8°" read —9° and —8°, or, 9° and 8° below zero.

In the 21st line, read —14°.

In the 26th line, read —28°.

In the 30th line, read —38°.

In the 31st line, read —24½°.

In the 39th line, read —40°.

A great difference will be seen in the two readings,—a difference equal to *twice the number* of degrees indicated. In the first, too, there is a manifest inconsistency which no reflecting reader will fail to observe, for it makes me say that in the "coldest day on record in this county," the mercury did not fall so low by *ten degrees* as in the previous day, nor so low by *fifty-six* degrees as in the 19th of 12th month.

The sign *minus* (—) is commonly used to indicate below zero, and in my communication I used it accordingly. No doubt the mistakes were made by the compositor, who, perhaps, did not consider the *value* of the signs.

Perhaps it may not be out of place to make a

few remarks upon the effects of the extremely cold weather of the past winter upon fruit trees. Apple trees are injured worse than any others. Many large, thrifty trees have lost nearly all of last year's growth. A large tree in my garden is nearly dead. One limb, which bore half a bushel of fine Greenings last year, looks as though it will never produce fruit again. Grafts set last spring, and which grew two feet or more, are, in many cases, *entirely dead*, and in others only a few inches of the larger end is alive. Young orchards, too, have suffered very much.

A neighbor, who had a fine orchard of grafted fruit, that has borne a few years, informs me that his trees are nearly all dead, causing not only a pecuniary loss, but a sad disappointment. Several maple trees, standing near his house, are also killed, although they had grown five years. I have not heard of an equal amount of damage in any other place, though all are complaining of injury. S. VARNEY.

Bloomfield, C. W., 6 Mo. 5, 1855.

EXTRACTS AND REPLIES.

AN EXAMPLE.

GENTLEMEN:—Nearly two years ago, I accidentally became a subscriber to your paper, and I *must* confess I am not sorry for it. My family now watch for its coming each week; my young men, too, delight upon "it to gaze" and peruse its well-filled and ever interesting columns. I am glad to have them receive instructions therefrom, and feel assured their morals will not be corrupted thereby, but that they will be benefited and strengthened in the way to respectability and usefulness. Need I inform you that their joys are my joys? Enclosed are two dollars to pay for my subscription for one year in advance from *September next*, for which please send me your receipt. I am, very truly yours.

Burlington, Vt., June 11, 1855.

REMARKS.—Though often receiving letters similar to the above, we do not often indulge in showing them to our neighbors. But this comes with so many tokens of grace and heart, that we cannot keep it to ourselves. It not only brings the sinew of all agricultural and commercial prosperity, *the cash*, but is accompanied by three excellent communications, each written in a clear, fair hand, and only upon one side of the sheet. What a noble example! May the writer live to see the *New England Farmer* a thousand years old, and welcomed by as many and as heartily as were the recent rains of which he speaks in one of his communications.

—

FOUR FAT BEEVES.

I noticed in the May number of the *N. E. Farmer* an inquiry of the live and dead weight of cattle. In the winter of 1854 I fatted four beeves which were butchered, and I send you a statement of their weight, which shows that by weighing them alive and deducting one-third, will give very nearly the weight of the quarters, tallow and hide, when dressed.

1 Cow, 11 years old past, 1360, off one-third.....907
Quarters 715, tallow 100, hide 90.....905

1 Steer, 3 years old past, 1443, off one-third.....962
Quarters 792, tallow 86, hide 101.....979

1 Steer, 2 years old past, 1225, off one-third.....817
Quarters 661, tallow 79, hide 84.....824

1 Steer, 2 years old past, 1410, off one-third.....940
Quarters 762, tallow 109, hide 89.....960

Yours and a subscriber,

Skaneateles, N. Y. 1855. P. WHITTELSEY.

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THE SEASON IN VERMONT.

We have just had the finest rain I ever witnessed, or at least it has been most appreciated; it commenced Saturday evening, the 3d instant, and came fine and gentle, not much more than a mist, and continued so for twelve hours, when it increased to a continued drenching rain, which has thoroughly saturated every thing out of doors. Crops never needed rain so much. Grass was dried up in spots over our intervales, and was fast extending over the whole. Corn that was planted early did not grow, while that more lately planted did not find moisture to sprout, or if it did, dried up. The same was the case with English grain. We have not had any rain since the season for planting, or even since the snow went off, to soak the ground. It has given new life to vegetation and the heart of the farmer.

Bolton, Vt., June 5, 1855. A SUBSCRIBER.

—

READING AND THINKING.

I rejoice to know that many of our farmers are beginning to see the importance of *reading and thinking* before acting, upon the subject of farming as well as political matters. I find many who are willing to be called "book farmers," provided there is money in the affair.

Yours, SOLOMON STEELE.

—

BLACK KNOTS ON PLUM TREES.

MR. EDITOR:—I was reminded a few days since by an article in your paper of what I saw in Nova Scotia. A gentleman pointed out to me some fine looking plum trees from which he had partially or wholly cut out the black knot, and then rubbed in spirits of turpentine. The wounds were healed up wholly or partially, as from any ordinary wound; the disease seemed to be eradicated from the previously affected part. I suggested to him the propriety of covering the wound with grafting wax immediately after the application of the turpentine. As this disease does not affect trees in this vicinity, I am unable to test the matter by experiment, but leave it for those who have the opportunity; it does not seem to me that the disease is beyond the reach of some specific remedy. Will some correspondent tell us what they know of this remedy? N. T. T.

Bethel, Me., June 5, 1855.

REMARKS.—Since having been informed of the use of spirits of turpentine as a remedy for the black knot on plum trees, by a lady, who communicated the fact through the *Farmer*, we have been using it on plum trees, and find it promises well. Some of the places on which we first applied it are now partially covered with a new and healthy-looking bark.

If it proves a remedy, it will be an important one.

HOW TO SOLDER.

MR. EDITOR:—Having once answered an inquiry, made through the *New England Farmer*, for which I received many thanks, I am induced to say a word in answer to "P. L.," "How shall I solder?" I have been in the same predicament with him. Having to join a pipe full of water, which could not be excluded, I cut off the end, seamed it out somewhat larger than for an ordinary joining to solder, and filled my splice with considerable lap; I then took a strip of new cotton cloth, dipped it in *hot* grafting wax, wound it round the joint, and, before it had time to cool, confined it with a strong twine. It has answered perfectly since. Yours truly,

Lancaster, June 4. BENJAMIN WILLARD.

ABOUT POTATOES.

If I had leisure, I would give you an article on potatoes, and, if you wish, will do so hereafter, detailing some "well-conducted experiments" in reference to an article in your last number, signed "S. P.," which he closes by saying, "Are there any experiments to prove it? If not, let us discard *theory* and determine the facts." I can at this time only state a few "facts." One is, that there are certain *fixed principles* or laws of nature, that, if known and regarded, will secure uniform results, invariably, under the same circumstances.

Failures are easily explained by one *acquainted* with these laws, on learning the management in a particular case. Large potatoes may give small returns simply because of *over-seeding*. Half the seed, even of small ones, may do as well, for the same reason that, with a given amount of feed, six small pigs would make as much pork as twelve larger, finer animals, limited to the same amount of *feed* and *room*. Had the Connecticut neighbor, "S. P.," cut off the cluster of eyes at one end of his large potatoes, and the feeble eyes at the opposite stem end, and planted only three or four central eyes, both gentleman would have learned something by experiment. I once told a curious, quizzing man, how he could raise potatoes with *four fingers*, like a man's hand. Two years after I passed his house (in Vermont,) and he was sorting a lot of potatoes, among which he found more than a peck of fac similes.

I will add, my convictions are that flavor, color, size and time of ripening potatoes, are equally and certainly subject to these principles and governed by these laws. And the same I deem reliable in grain and *fruits*, if we raise the unmingled seed. BENJAMIN WILLARD.

Lancaster, June 4, 1855.

ABOUT SOLDERING PIPES.

In reply to "Prof. Tinker's" inquiry in the *Farmer*, a few weeks since, please inform him that by cutting his pipe smooth at the end, and crowding in six inches of a candle, softened on the outside by a hot copper, and then pouring in melted tallow, he may stop the water perfectly tight, and then perform the work desired. After the soldering is complete, the candle may be removed by pouring on hot water. There should be a space of six inches between the tallow and the place to be soldered. This reply is from actual practice and not dead theory.

Vt., May 23. TINKER PORTER.

For the New England Farmer.

ARTICLES IN SEASON.

In the *Farmer*, for February 3, there is an article from a correspondent, who complains that you do not insert the articles you receive till two months after the season of operation is over. The remarks I am about to make have reference to the Monthly *Farmer*. Let us reason together, and see if your correspondent has any cause for complaint in this matter. This being a season of the year when there is not so much to do as there will be two months hence, it is a favorable time for the farmer or gardener to study out improved plans in plowing, sowing, harvesting, or improved modes of feeding oxen, cows, pigs or poultry. He tries his plans, and notes the result, and not being a selfish man, he commits it to paper while it is fresh in his mind, and, as soon as he has a leisure moment, prepares it for publication in the *New England Farmer*, or some other agricultural journal, for the benefit of his fellow-men. It will be seen by this that an article cannot appear *till it has been proved;* then, if it is two months too late, it is, at the same time, ten months too soon! Hence the value of an agricultural paper in book form—it being supplied with a complete index of all the subjects treated upon, likewise a list of the correspondents' names, so the reader has no trouble in finding any article at *any* time. I have been a subscriber to the present *New England Farmer* ever since it was published, and if I could not replace them with others, I would not part with them for four times what they cost me.

The writer of the article referred to above, does not seem to like the idea of reviewing the previous number. I cannot see any objection to this; I like it. Yours, HUNTER.

Whitinsville, Mass., Feb. 8, 1855.

For the New England Farmer.

THE WEATHER AND THE CROPS IN NORTHERN VERMONT.

MR. EDITOR:—May was free from rain; vegetation was kept upon "short allowance" all through the month, and her kindest friends began to despair of her success. Many a countenance was o'ercast with gloom. The forebodings in regard to the drought were very serious and plentiful; but June came, and with it gentle, gentle and most welcome rain. Never did it cheer the heart of the husbandman more; in fact it cheered everybody, for the merchant, mechanic, manufacturer and professional man now see clearly the great importance of the farmer, and of good crops, for without them business of all kinds languishes, and the grass is made to grow in our thoroughfares. Since June came in, it has rained with us *every single day*, and it now continues its gentle and welcome visits to the previously parched earth. I am not of the fault-finding or never-to-be-satisfied kind; still if it continues much longer, we, like Macduff, shall cry "Hold, hold, enough!" Still a wise Providence orders all these things aright, and in his hands are we resigned to place the matter. The ground needed a most powerful rain, a thing it has not had for a year or more, and now we *have it*. Our long empty cisterns, wells, brooks and

streams will again appear as of old. Each will rejoice at finding itself "at home again."

The effects so far have been surprising. Grass and grain have grown astonishingly. We fear the former will be rather light, however, owing to the fact that in many places it was either "winter or summer killed;" many spots being entirely free from all signs of verdancy. The severe drought of last season, no doubt, injured grass in many places, and then the very dry time we have had all through May gave it a complete quietus. At best, our hay crop, as we now think, must be much under the average, making all allowance for the powerful effects of the long-continued and most welcome rains we are daily having. Corn, potatoes, &c., are springing up finely. With warm and sunshiny weather, they will now come on rapidly.

Be assured that old Vermont has "sown and planted the seed" this year. If she "reaps as she has sown," our storehouses will be too small, and we can feed all of our neighbors with a surplus. May the great industry and hopes of our farmers be fully realized this autumn. It will give cheer to every interest; it will speed the spindle, the cars, the ship; give enterprise a new joy; commerce new energy and hope, and the whole country will go on rejoicing in plenty and cheerfulness. SO-MAY-IT-BE.

Burlington, Vt., June 11, 1855.

For the New England Farmer.

CHEAT IN FERTILIZERS.

Scarcely a paper comes to hand, that does not contain more or less notice of these impositions. The grossest of the kind we have seen, is the mode of compounding an article, called "*Mexican guano, almost equal to Peruvian*," for which an establishment is said to be founded near New York. That any man, or association of men, with any regard to character whatever, should presume upon such an experiment, is most astounding.

If we do not mistake, many of the condensed fertilizers now before the public, will be found, on being tested, equally valueless. These patent invigorators of the fertility of the soil, like the patent restorators of the health of the body, will be found like their authors mere humbugs. Some discriminating test of quality, or guarantee of purity is imperatively demanded. The man who imposes upon the honest tiller of the soil, by putting forth such spurious articles, is as much more guilty than he who practices other counterfeits, as is the fraud more difficult of detection. We have witnessed, the present season, striking illustrations of the fertilizing power of genuine guano on grass land. Many of our gardeners have applied it in connection with other manure, where vegetables are to be grown, and we hope to hear favorable reports of its value. *.

June 11, 1855.

☞ The Farmer's High School, incorporated by the last legislature of Pennsylvania, was organized at Harrisburg on the 14th. The offer of Gen. Irwin to give 250 acres of land if the school shall be located in Harris, Centre county, and other propositions to give or sell sites, were referred to be reported on early in July, after an examination of the localities.

THE HARVEST.

Our exchanges from every quarter bring cheering accounts of the growing crops, and there is now every reason to believe that the harvest of 1855 will be the largest ever realized in this country. Stimulated by short supplies and high prices, and by the prospect of a ready market in Europe, an unusual breadth of land has been seeded, and thus far a kind Providence has withheld nothing that is needed to crown the labors of the husbandman with success. From the harvest reports before us, we cull a few particulars, showing the general tenor of accounts from various quarters.

"Maine never had so much seed in the earth before, at one time, and the prospect is most promising for bountiful crops."—*Augusta Banner.*

"The rain has saved the crops that were perishing with drought, and all vegetation is growing rapidly. We think the amount of grain and potatoes put into the soil this year, is full one-third more than usual, and if the crops do well, there will be an abundant harvest."—*Rutland* (Vt.) *Herald.*

"A gentleman who travelled through the central and southern portions of this State quite extensively during the last ten weeks, informs us that the prospects of a good crop are encouraging. Much of the damage done to wheat fields he attributes to poor tillage, and thinks the devastations of the fly are greatly over-estimated."—*Detroit Tribune.*

"The cotton and provision crops along the seaboard of Georgia, are also very promising. The cotton is somewhat backward but is doing well. A friend writes us from Bryan County, that the late rains have started the grass to growing as well as the cotton, and that it is all the planter can do to keep it in subjection. The provision crops in the southern portion of Georgia were never more promising than they are at present. The same remark will apply to the crops throughout this State. Less land has been planted in cotton and more in grain, than in former years, and the prospect of an abundant yield is most encouraging, especially of the provision crops, notwithstanding the backwardness of the season."—*Savannah Republican.*

"In a journey of 3,890 miles through portions of the States of Ohio, Kentucky, Indiana, Illinois, Missouri, Iowa, Michigan, Pennsylvania and Virginia, performed during the past six weeks, and mostly by daylight, my heart has been constantly gladdened by the prospect of the growing crops. In a travelling experience of more than fifteen years, I have never seen so broad a portion of the country under cultivation as at present, or a period when the crops of every description promised a more abundant yield than now."—*Cincinnati Gazette.*

A correspondent of the *Charleston* (S. C.) *Courier*, 14th inst., who has spent some time in Upper Georgia and East Tennessee, informs that paper that "the crops generally were unusually promising, and the extent of culture beyond former years. The wheat harvest had commenced in Georgia, and will soon be ready in Tennessee.

A gentleman well qualified to judge, estimates that one county of Georgia alone will yield 100,000 bushels of wheat, and there is every prospect that the leading provision staples in that great grain region will at no very distant day settle at the old prices."

A letter from Knoxville, dated the 6th inst., says: "We have recently had copious rains, and our crops in East Tennessee, except oats and hay, will be very abundant. Wheat is very promising indeed, and will be gathered in two or three weeks. Crop will be two or three times larger than ever before."

The *Charleston* (Va.) *Free Press* of the 14th, says:—"The improvement in the growing crop of wheat, for the last two weeks, has astonished every one. Barring any further injury, we think the yield this year will be fully equal to that of last year. Some of the farmers in the vicinity of Fredericksburg commenced harvesting their wheat last Tuesday."

A gentleman who travelled over 600 miles in Illinois within a few days, returned to Chicago and reported on the 11th that the wheat fields, without exception, are promising unequalled crops; the corn is also luxuriant, in some places almost in tassel; and the fruit crop is tremendous, being the greatest abundance of apples, peaches, cherries, &c., wherever there was a tree planted. The wheat crop will probably be 25 per cent. greater than ever before grown in Illinois; and about half the freight cars are laden with patent grain reapers, threshing machines, and other agricultural implements.

The generally favorable tone of these reports is slightly modified by accounts from certain quarters, of the appearance of the bug or the fly among the grain fields. It is generally reported, too, that the coolness of the spring has kept back corn. Oats, also, in some localities are not a promising crop.

For the New England Farmer.

GOOSEBERRY CATERPILLAR.

MR. EDITOR:—Can you, or any of your correspondents, inform me of any method of destroying the gooseberry caterpillar? For a few years past, all our gooseberries have been destroyed by this destructive insect; they have just commenced their work of destruction, for this year, and are now about one-fourth of an inch in length, and of a whitish-green color, and when full grown, they are about one-half an inch in length, and of a pale green color, and oftentimes of a greenish brown. GEORGE G. CHENEY.

Weston, June 5, 1855.

REMARKS.—COLE, in his Fruit Book, says that spent tan strewed under and around the bushes, will sometimes prevent the ravages of the gooseberry caterpillar. We have experienced no difficulty in this way, and know of no certain remedy.

☞ Flour is offered in the New York market, for delivery in July and August, at less than $9 a barrel, without finding a purchaser.

LADIES' DEPARTMENT.

DOMESTIC RECEIPTS.

TO KEEP SILK.—Silk articles should not be kept folded in white paper, as the chloride of lime used in bleaching the paper will probably impair the color of the silk. Brown or blue paper is better; the yellowish, smooth Indian paper is best of all. Silk intended for dress should not be kept long in the house before it is made up, as lying in the folds will have a tendency to impair its durability by causing it to cut split, particularly if the silk has been thickened by gum.

Thread lace veils are very easily cut; satin and velvet being soft are not easily cut, but dresses of velvet should not be laid by with any weight above them. If the nap of thin velvet is laid down, it is not possible to raise it up again. Hard silk should never be wrinkled, because the thread is easily broken in the crease, and it never can be rectified. The way to take the wrinkles out of silk scarfs or handkerchiefs, is to moisten the surface evenly with a sponge and some weak glue, and then pin the silk with some toilet pins around the shelves on a mattrass or feather bed, taking pains to draw out the silk as tight as possible. When dry the wrinkles will have disappeared. The reason of this is obvious to every person. It is a nice job to dress light colored silk, and few should try it. Some silk articles should be moistened with weak glue or gum-water, and the wrinkles ironed out by a hot flat-iron on the wrong side.—*Scientific American.*

SPONGE CAKE, No. 1.—Three-quarters of a pound of flour, twelve eggs, one pound of sugar, a table-spoonful of rose-water. Beat the yolks and sugar together until they are very light. Whisk the whites till they are perfectly dry, add the rose-water, then the whites and flour alternately, but do not beat it after the whites are in. Butter your pans, or if you wish to bake it in one large cake, grease a mound, pour in the mixture and bake it. The small cakes should have sugar sifted over them before they are set in the oven, and the oven should be hot.

SPONGE CAKE, No. 2.—One pound of sugar, three-quarters of a pound of flour, ten eggs. Dissolve the sugar in one gill of water, then put it over the fire and let it boil. Beat the eggs a few minutes, till the yolks and whites are thoroughly mixed together, then stir in very gradually the boiling sugar; beat the eggs hard all the time you are pouring the sugar on. Beat the mixture for three-quarters of an hour; it will get very light. Stir in the flour very gently, and add the grated rind of a lemon. Butter your pan and set it on the oven immediately.

SPONGE CAKE, No. 3.—Five eggs, half a pound of loaf sugar, the grated rind and juice of one lemon, a quarter of a pound of flour. Separate the yolks from the whites. Beat the yolks and sugar together until they are very light, then add the whites after they have been whisked to a dry froth, alternately with the flour. Stir in the lemon, put the mixture in small pans, sift sugar over them, and bake them.—*National Cook Book.*